Volume IV - Identification and Screening of Alternatives to Accomplish Training Goals at Fort Leonard Wood

ENVIRONMENTAL IMPACT STATEMENT

Relocation of U.S. Army Chemical School
and U.S. Army Military Police School
to
Fort Leonard Wood, Missouri

March 1997

ENVIRONMENTAL IMPACT STATEMENT ORGANIZATION

This Environmental Impact Statement (EIS) describes the anticipated impacts of relocating the U.S. Army Chemical School and U.S. Army Military Police School to Fort Leonard Wood. It identifies and describes the proposed actions, alternatives to these actions, and related environmental effects as required by the President's Council on Environmental Quality regulations, the National Environmental Policy Act and Army Regulation 200-2. The main body of the EIS consists of Volumes I and II. In addition, Volumes III and IV have been prepared as supporting documents, with limited distribution. All four volumes of the EIS are available for review at listed information repositories or upon request. A complete Table of Contents for each volume has been included in Volume I. A summary of the contents of Volumes I - IV is provided below.

VOLUME I

EXECUTIVE SUMMARY provides an overview of the information presented in the EIS but is not intended to replace the detailed evaluation presented in the body of the document.

Section 1 **PURPOSE, NEED AND SCOPE** describes the base closure and realignment decision-making process, why the EIS is being prepared, the scope of the document, and the EIS public involvement process.

Section 2 **OVERVIEW OF THE PROPOSED ACTION** describes relevant background information associated with the proposed action and an overview of the proposed action analyzed in the EIS.

Section 3 **DESCRIPTION OF ALTERNATIVES - INCLUDING THE PROPOSED ACTION** provides a discussion of how the EIS study alternatives were developed, and a description of alternatives to be evaluated in the EIS (including a detailed discussion of the Army's proposed implementation action).

Section 4 **AFFECTED ENVIRONMENT** describes the existing physical, social and economic characteristics of Fort Leonard Wood and its environs.

Section 5 **ENVIRONMENTAL CONSEQUENCES** provides an analysis of the environmental and socioeconomic effects of the proposed action and alternatives.

Section 6 **LIST OF PREPARERS** identifies the professional and technical staff responsible for the preparation of the EIS, and provides a summary of their qualifications.

Section 7 **DISTRIBUTION LIST** identifies public officials, public agencies, public interest groups, organizations, and individuals that received copies of the EIS.

Section 8 **INDEX** provides an alphabetical list of topics addressed in the EIS.

Section 9 **REFERENCES** provides a listing of materials used in the development of the EIS.

Section 10 **PERSONS CONSULTED** identifies public agencies, public interest groups, organizations, and individuals that were consulted during the development of the EIS.

VOLUME II

IMPACT ANALYSIS MATRICES have been included to graphically illustrate the anticipated impacts of implementing the proposed BRAC action at FLW. These matrices are intended to be used in association with the narrative and tabular data provided in Section 5, *Environmental Consequences*, of Volume I. **EIS REVIEW COMMENTS AND RESPONSES** for all verbal and written comments received during the comment period have also been included in Volume II.

VOLUME III

TECHNICAL APPENDICES includes materials that support the development of the EIS. Volume III is a supporting document, with limited distribution, which is available for review at listed public repositories (see subsection 1.4.6.3) or upon request.

VOLUME IV

IDENTIFICATION AND SCREENING OF ALTERNATIVES TO ACCOMPLISH TRAINING GOALS AT FORT LEONARD WOOD documents the process used to formulate the training method alternatives that are analyzed in the EIS. Volume IV is a supporting document, with limited distribution, which is available for review at listed public repositories or upon request.

This document is printed on recycled and recyclable paper.

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IV.1 INTRODUCTION

This document summarizes the development of alternative methods for meeting the training goals of the Military Police School and Chemical School (hereafter referred to as the training activity goals (TAGs) at FLW). The training goals were developed from a review of the approximately 32 Programs of Instruction (POIs) which will be relocated from FMC as part of the proposed action to relocate the U.S. Army Chemical School and 40 POIs which will be relocated as part of the proposed action to relocate the U.S. Army Military Police School. A complete listing of POIs is contained in Volume III, Appendix B, Tables B.5 and B.6 of the EIS. Included in the listing are courses that are designed to augment training at the Chemical School for the U.S. Air Force, U.S. Marine Corps and U.S. Navy; and courses to be provided by the Military Police School for the U.S. Marine Corps. Table B.5 also contains a listing of Chemical School System Training Plans (STRAPs) that discuss the training requirements for new pieces of equipment that will be fielded in the near future. Information from the POIs was used to facilitate grouping of similar training goals and served as the outline for formulation of alternative methods for accomplishing the training goals as discussed in this document.

Following identification of training activities associated with the Military Police School and Chemical School, alternative training methods were reviewed, screened and grouped using a five-step process:

- **Step 1** included an initial screening of each identified training method. This screening identified training methods which will provide the required minimum level of skill training in as a safe manner as viable. Training methods which will not result in the required minimum level of skill development and training methods that resulted in unnecessary safety risks for the students, staff or members of the surrounding civilian community were determined to be non-viable. Additional information concerning this initial screening process is provided in section IV.5.

- **Step 2** included the development of a more detailed description of the viable training method alternatives. These more detailed descriptions are located in section IV.6

- **Step 3** consisted of a secondary screening of all viable training alternatives to select the environmentally preferred training method and optimum training method for each training goal. This selection was based on the relative, anticipated ability of the training methods to provide the required level of skill proficiency; relative potential environmental impacts that will be associated with the training methods; short-term costs associated with

implementing the alternative; and long-term costs associated with the alternative. Additional information concerning this secondary screening is contained in section IV.7.

- **Step 4** consisted of a third screening of the environmentally preferred and optimum training methods to determine if individual training methods could be adequately performed on-post at FLW. As discussed in section IV.7.4, consideration of off-post locations was limited to those training activities that:

  1) may require the use of land areas outside of the current installation boundaries based on the need for extensive vehicular or troop movement; and/or

  2) have the potential to cause significant adverse impacts on known sensitive environmental or cultural resources within the existing boundaries of FLW.

- **Step 5**, as discussed in section IV.8, resulted in the grouping of alternatives for analysis in the EIS.

IV.2 CONSIDERATION OF CONTINUED TRAINING AT FORT McCLELLAN

The closure of FMC and the relocation of the training functions currently accomplished at the Military Police School and Chemical School was directed by Public Law 101-510. Consequently this alternative is not viable for any of the training goals discussed in this analysis and has been eliminated from further consideration.

IV.3 TYPICAL TRAINING ALTERNATIVES EVALUATED

Typical alternatives reviewed for each training goal included:

IV.3.1 The No Action Alternative

Under the "No Action Alternative", all existing training actions at FLW will continue, but new training activities required to support the relocation of the Military Police School and Chemical School will not be implemented. The environmental impacts of existing, ongoing actions will continue and training for the Engineer School students that are currently located at FLW will remain unchanged. Consequently this alternative will result in the identification of:

- an environmental baseline for ongoing actions at FLW and

- the operational impacts of failing to implement training in the identified training goals.

The environmental baseline serves as a benchmark for evaluation of impacts associated with various alternatives considered for initiating proposed Military Police School and Chemical School training activities at FLW.

IV.3.2 Alternative Methods To Accomplish Training

Alternative methods to accomplish required training goals identified in the POIs of the Chemical School and Military Police School schools include:

- the relocation of the current training practice employed at FMC; and

- the identification of modified training practices.

IV.3.2.1 Relocate Current Practice Training Method Alternatives. The "Relocate Current Practice Training Methods Alternative" (RCP Alternative) has been included to consider the impact of relocating training from FMC to FLW using the same training procedures, methods and

techniques that are currently used at FMC. This alternative may be expected to result in a similar level of soldier readiness to that currently provided by training at FMC. This alternative may also be expected to result in positive synergistic effects gained by training Army Engineers, Military Police and Chemical Specialists at the same location.

IV.3.2.2 Modified Training Practices. A number of "Modified Training Practice Alternatives" have been developed as part of the EIS process to identify and consider new methods of accomplishing Military Police School and Chemical School training goals at FLW. These modified training practices might:

- reduce or eliminate adverse environmental or economic impacts associated with current operations;
- provide improved operational readiness through streamlined or improved training procedures;
- offer cost savings over current training methods with no or minimal operational impact;
- increase the positive benefits associated with training actions through the use of new technology; or
- expand the potential synergistic effects of training Army Engineers, Military Police and Chemical Specialists at the same location.

Modified training practices might include the expansion of existing simulation capabilities and techniques, development of new simulation capabilities, modification of existing training practices, or the introduction of new training techniques.

IV.4 TRAINING ALTERNATIVES CONSIDERED

Table 2.1 and Section 3.3 of Volume 1 and Table IV.1 identify the BRAC 95 training goals to be considered in this EIS, a description of a wide range of potential training alternatives which might be used to accomplish each training goal and a brief statement as required to define the intent of each goal. For the purpose of this analysis the training requirements of the Military Police School and Chemical Schools have been grouped into one of eleven training activities groups (TAG). These groupings include:

- **1. Battlefield Procedures** (Training Activity Group No. 1);
- **2. Biological Agent Detection** using the Biological Integrated Detection System (BIDS) (Training Activity Group No. 2);
- **3. Nuclear, Biological and Chemical Reconnaissance** using the M93 Nuclear Biological and Chemical Reconnaissance System (NBRCS) which is commonly referred to as the M93 FOX vehicle (Training Activity Group No. 3);
- **4. General Military Training** (Training Activity Group No. 4);
- **5. Military Police Procedures** (Training Activity Group No. 5);
- **6. Nuclear, Biological and Chemical Procedures** (Training Activity Group No. 6);
- **7. Obscurant (Smoke) Procedures** (Training Activity Group No. 7);
- **8. Radiation Safety** (Training Activity Group No. 8);

- **9. Research Support** (Training Activity Group No. 9);
- **10. Small Arms Procedures** (Training Activity Group No. 10); and
- **11. Vehicle Operations** (Training Activity Group No. 11).

These groupings and their associated subgroupings were developed during a review of the POIs and are intended to allow for the analysis of similar training goals and methods.

IV.5 INITIAL SCREENING OF TRAINING METHODS

An initial screening of the alternative training methods was completed to eliminate non-viable training methods from further consideration. The results of this screening are also described in Table IV.1.

This initial evaluation was involved participants from the following organizations:

- U.S. Army Training and Doctrine Command, Base Closure and Realignment Office;
- U.S. Army Chemical School;
- U.S. Army Military Police School;
- U.S. Army Engineer School;
- U.S. Army Engineer Center and Fort Leonard Wood (USAEC & FLW) , Safety Office;
- Fort McClellan Strategic Plans Office; and
- USAEC & FLW BRAC Transition Office.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
1. BATTLEFIELD PROCEDURES (Training Activity Group No. 1)			
1.1 Call-For-Fire Support (Training Goal 1.1)			
Goal			
	To ensure accurate target acquisition, identification, location and timing of call-for-support.		
Training Activities			
	This training activity includes instruction in the coordination of artillery or air fire support to a designated location and at a designated time for either defensive or offensive support of military operations.		
No Action			
	No Action (Baseline Conditions at FLW).	Training in this training goal at FLW is currently accomplished through the use of lecture instruction followed by training in a dedicated applied instruction classroom which is set up as a viewing theater. The applied instruction (viewing theater) classroom is equipped with several 35 mm slide projectors, binoculars that are scaled based on the students location in the classroom and a wall mounted "operational" viewing area. Battlefield operational scenes are shown to the students and each student is required to make a decision if additional fire support is required. If additional support is required the student must identify the coordinates for the fire and radio for assistance. The simulator then has the ability to indicate the location of the students call for assistance, allowing the students to demonstrate their effectiveness in this skill area. At the present time this applied instruction classroom is under-utilized, with a total utilization rate of less than 40 percent.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	Relocate Current Practice from FMC to FLW.	Under this alternative, an additional increment of "Call-For-Fire Support" training will be relocated to FLW as required to support missions to be realigned from FMC. This alternative will include lectures in a general instruction classroom, followed by individual development and demonstration of skill inside an applied instruction classroom. The existing applied instruction classroom is very similar to the one currently used at FLW and this alternative will collocate Chemical School and Military Police School training in the existing facility at FLW.	Viable, this alternative is able to provide the required level of training and the existing facility is capable of supporting the additional training load.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
		1	Lecture (only) (Modified Training Option (MTO) 1)	This alternative will include only lecture instruction. Instruction which will include information on the principles involved with the training goal, but not allow for students to demonstrate their skill in an interactive mode as currently provided in the applied instruction classroom.	Non-viable, this alternative is unable to provide the required level of training.
		2	Field/ maneuver training (MTO 2)	This alternative will include the use of a classroom to provide instruction on the general principles involved in the training goal, followed by the use of a live-fire range to practice calling for artillery support. This alternative will result in the use of ammunition to perform training that is currently simulated at FLW and FMC; therefore, this alternative may generate a greater potential for environmental impact than the current practices used at either FLW or FMC to accomplish this training.	Non-viable, this alternative has the potential to result in unsafe training conditions.
		3	Computer simulation (MTO 3)	Under this training alternative, general classroom instruction will be augmented with the use of a more advanced computer driven simulator than is possible through the use of the 35 mm slide projection system that is currently available at either FLW or FMC. The simulator will be developed to allow for better control of lighting, sound and visual conditions, thereby resulting in a more realistic training environment. This newer applied instruction classroom will replace the existing facility and will be used for training Military Police School, Chemical School and FLW personnel.	Viable, this alternative is able to provide the required level of training.
	1.2 Maneuver Operations (Training Goal 1.2)				
		Goal			
			To ensure personnel understand the principles involved with planning, coordinating and controlling tactical movement of troops, vehicles, aircraft and equipment on a battlefield. This movement is conducted as part of either defensive or offensive military operations.		
		Training Activities			
			This training activity includes instruction in the coordination, control and movement of personnel, vehicles and equipment on a battlefield.		

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal			Alternative Title	Alternative Description	Viable or Non-Viable
		No Action			
			No Action (Baseline Conditions at FLW).	Training in this training goal at FLW is currently conducted through the use of classroom instruction followed by field/maneuver training in maneuver training areas (on-post and on U.S. Forest Service lands within the installation boundary). This classroom and field training is then augmented by simulators (which are currently under construction and will be operational in 1999).	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
		Alternatives			
			RCP Alternative from FMC to FLW.	This alternative includes the use of a general instruction classroom, followed by the use of field/maneuver areas and simulators. The use of simulators allows students to obtain and demonstrate skill during controlled battlefield scenarios in which teams of students coordinate their teams actions. The simulator allows for development of more realistic large-scale wartime scenarios than can be replicated in field/maneuver training. Field/maneuver training, however, is required to provide training in a more realistic environment involving day and night operations, weather impacts and a degree of isolation from other activities.	Viable, this alternative is able to provide the required level of training.
		1	Lecture (only) (MTO 1)	This alternative will include the use of only lecture instruction, without the additional skill development offered by field/maneuver and simulator training.	Non-viable, this alternative is unable to provide the required level of training.
		2	Field training (MTO 2)	This alternative will include the use of field/maneuver and live-fire range areas, but will not involve the use of simulators to complete training currently performed at FMC.	Non-viable, this alternative is unable to provide the required level of training.
		3	Computer simulation (MTO 3)	Under this training alternative, training will include the development and use of a more advanced computer driven simulator, which will allow for the elimination of field/maneuver training in designated maneuver area. Use of the simulator will allow for control of lighting, sound and movements.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
1.3 Mines and Obstacles Designed to Prevent to Movement (Training Goal 1.3)					
	Goal				
		To ensure personnel know: how to fortify defensive positions; how to impede the progress of aggressor forces or direct them into positions advantageous to U.S. and allied forces; and methods of breaching enemy obstacles to movement.			
	Training Activities				
		This training activity includes the use, placement, location, neutralization, camouflage, explosion and demolition of both field expedient deterrents and pre-manufactured (issue) mines; and the use, placement, location, neutralization and camouflage of other obstacles designed to hinder movement. Flame field expedient (FFE) deterrent training involves the use of normally available fuels and explosives to construct both individual deterrents, deterrent fields and other explosive obstacles designed to prevent movement, including expedient flame devices. Training on pre-manufactured mines includes claymore and other issue mines. Other obstacles to movement include the use of natural barriers, tank traps, concertina wire and other similar devices.			
	No Action				
			No Action (Baseline Conditions at FLW).	Training in this training goal at FLW is currently accomplished through the use of classroom instruction followed by field training. Field training includes: the placement of claymore mines, concertina wire and other obstacles to movement; the manufacture, placement and employment of FFE deterrents; and the breaching of these items. (Following the completion of training, obstacles to movement are removed.) Manufacture of FFE deterrents and obstacles includes the use of "thickened fuel" and detonation cord. Both expedient deterrents and issue mines are exploded to demonstrate the impact of these weapon systems. In addition, training includes instruction in the breaching of these obstacles to movement, including the use of explosives to eliminate the obstacles.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal			Alternative Title	Alternative Description	Viable or Non-Viable
		Alternatives			
			RCP Alternative from FMC to FLW.	This alternative includes the use of general classroom instruction followed by field training. Students learn the principles involved in the training goal through classroom instruction and the demonstration of issue and FFE deterrents and other obstacles designed to prevent or hinder movement in field training areas. Current field training practices concerning field expedient obstacles include the use of approximately 50 one-gallon containers of "thickened fuel" at the hasty field demonstration, 50 gallons in one 55-gallon drum at the directional demonstration using thickened fuel (fougasse), 500 gallons in ten 55-gallon drums at the FFE demonstration and 300 gallons at the expedient flame training demonstration during each training class (total 900 gallons).	Viable, this alternative is able to provide the required level of training.
		1	Lecture (only) (MTO 1)	This alternative will include the use of only lecture instruction, without the additional skill development offered by field training.	Non-viable, this alternative is unable to provide the required level of training.
		2	Field training (MTO 2)	This alternative will include the use of a live-fire range, but will not include the use of classroom instruction.	Non-viable, this alternative is unable to provide the required level of training.
		3	Applied instruction classroom (MTO 3)	This alternative will include the use of classroom instruction which will be augmented with the use of training aids and the use of sample inert mines and obstacles to assist students in visualizing the types of items being discussed.	Non-viable, this alternative is unable to provide the required level of training.
		4	Inert (simulated) mines and obstacles (MTO 4)	This alternative will include the use of applied instruction classroom instruction followed by field training with inert mines and obstacles. Lecture instruction will include the use of training aids and the use of sample inert mines and obstacles to assist students in visualizing the types of items being discussed. Field training with inert mines and static obstacles to movement will reinforce the principles involved in the placement and employment of these items.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
		5	Reduced charge FFE deterrents and inert mines and obstacles (MTO 5)	This alternative will include field training with reduced charge FFE deterrents, ammunition and explosives. This alternative includes the use of general instruction classroom instruction followed by field training. Students learn the principles involved in the training goal through classroom instruction, then demonstrate their skills in the field. This alternative will reduce the quantity of fuel currently used at FMC (see RCP Alternative above) through the use of reduced charge FFE deterrents, and inert mines and obstacles. The field training will be augmented with professionally developed video tapes of similar explosions to demonstrate the explosive power and individual characteristics of these devices. The film will include slow-motion, close-up shots of the outward explosion, dispersion of the metal fragments and flames and the secondary fire created in the impact area. Additionally the film will include visual indicators of the actual heat level involved and allow students to see the explosive pattern of each device individually and when combined with other devices. It is estimated that this alternative might reduce the "thickened fuel" requirement to approximately 50 gallons of "thickened fuel" in one-gallon containers at the hasty field demonstration, 50 gallons in one 55-gallon drum at the directional demonstration, 250 gallons in three 55-gallon drums at the FFE demonstration and 200 gallons at the expedient flame training during each training class (total 550 gallons).	Viable, this alternative is able to provide the required level of training.
		6	Live FFE deterrents and mines in a controlled area (MTO 6).	This is a modified version of current practice (discussed in the RCP Alternative above). Students learn the principles involved with the training goal in a general instruction classroom and then demonstrate their skill in the field. The training area will be modified during construction to limit the potential for contamination of both surface and ground water in the area.	Viable, this alternative is able to provide the required level of training.
		7	Inert and reduced charge FFE deterrents and mines in a controlled area (MTO 7).	This is a modified version of training discussed in alternative 5 above. Students learn the principles involved with the training goal in a general instruction classroom and then demonstrate their skill in the field with inert and reduced charge FFE deterrents and mines. Construction modifications to the training area will limit the potential for contamination of both surface and ground water in the area.	Viable, this alternative is able to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal			Alternative Title	Alternative Description	Viable or Non-Viable
		8	Live FFE deterrents and mines in an indoor area (MTO 8).	This is a modified version of current practice. Students learn the principles involved with the training goal in a general instruction classroom and then demonstrate their skill in an indoor controlled area with reduced charge FFE deterrents, and mines and obstacles to movement. This training will be augmented with specifically designed films (as discussed in alternative 5) that will help students understand the potential impact and employment of these devices.	Non-viable, this alternative has the potential to result in unsafe training conditions.
		9	Computer simulation (MTO 9)	Under this training alternative, training will include the development and use of a computer driven simulator. Use of the simulator will allow for control of lighting and sound in order to simulate the conditions which will result from the use of FFE deterrents, and mines and other obstacles to movement.	Non-viable, this alternative is unable to provide the required level of training.
	1.4 Nuclear, Biological and Chemical (NBC) Warning and Reporting System (Training Goal 1.4)				
		Goal			
			To ensure personnel know how to use defensive command, control and communication procedures, and know what will be required if NBC weapons were employed by an enemy.		
		Training Activity			
			This training activity includes classroom instruction on the detection, identification, tracking, decontamination and defense against NBC weapons in a battlefield environment. This training goal does not include the instruction of personnel on the use of their individual personal protective equipment (which is included in item 4.3) or the training of personnel in recovery, survival or decontamination of personnel and equipment (which are included in items 6.1, 6.2., 6.3 and 6.4).		
		No Action			
			No Action (Baseline Conditions at FLW).	Training in this training goal at FLW is currently accomplished through the use of classroom instruction followed by field/maneuver training. The field/maneuver training exercises require personnel to don protective equipment and perform required tasks for limited periods of time. This training (on-post and on U.S. Forest Service lands within the installation boundary) is intended to reinforce the types of difficulties that they might anticipate on a NBC battlefield.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
Alternatives			
	RCP Alternative from FMC to FLW.	This alternative will include students learning the principles involved in the training goal in a classroom environment. The students then use simulators to obtain and demonstrate command, control and communications skills during a controlled battlefield scenario. The simulators also allow for the demonstration of weather effects on potential NBC environments and move the area of potential contamination across the battlefield. Using the simulators, students learn the importance of communicating clear, accurate information in a timely manner to the specific units that are impacted. The use of these simulated scenarios also allows teams of students to coordinate their teams' actions with other teams. This training is augmented by field/maneuver training exercises where students in chemical protective clothing perform required tasks for limited periods of time. This training reinforces for the students the types of difficulties that they might anticipate on the battlefield.	Viable, this alternative is able to provide the required level of training.
1	Lecture (only) (MTO 1).	This alternative will include the use of only lecture instruction, without the additional skill development offered by field/maneuver and simulator training.	Non-viable, this alternative is unable to provide the required level of training.
2	Field/ maneuver training (MTO 2).	This alternative will include classroom discussion followed by the use of field/maneuver training, without the additional skill training offered through the use of simulators. Students will don protective equipment an perform required tasks for limited periods of time. This training reinforces for the students the types of difficulties that they might anticipate on the battlefield.	Non-viable, this alternative is unable to provide the required level of training.
1.5 Night-Time Squad Engagement (Training Goal 1.5)			
Goal			
	To develop operational procedures for use during night-time engagements and to understand the potential advantages that night-time operations offer.		
Training Activity			
	This training activity includes instruction on night-time squad engagement and battlefield procedures using small arms (listed in training goal 10.1 and 10.2).		

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
No Action			
No Action (Baseline Conditions at FLW).		Training in this training goal at FLW is currently accomplished through the use of classroom instruction followed by field/maneuver training exercises and live fire on ranges specifically designed to assist in training personnel in night operations.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW.	This alternative will include the use of classroom instruction to introduce students to the principles involved in the training goal. This training will be followed by the use of the Fire Arms Training Simulators (FATS) which allow students to obtain and demonstrate skills during controlled day-time and night-time scenarios. This fire arms training is then further developed by the use of a live-fire weapons training range.	Viable, this alternative is able to provide the required level of training.
1	Lecture (only) (MTO 1)	This alternative will include the use of only lecture instruction, without the additional skill development offered by simulator and live-fire range training.	Non-viable, this alternative is unable to provide the required level of training.
2	Firing range (only) (MTO 2)	This alternative will include the use of a live-fire training range to train students, without the benefit of simulator or classroom training. The alternative will have to expand the amount of time spent and ammunition used by each student during range training to replace the degree of weapons familiarization and training provided by the simulators.	Non-viable, this alternative is unable to provide the required level of training.
3	Firing range (MTO 3).	This alternative includes the use of classroom instruction to provide training on the principles of the training goal, followed by use of a live-fire training range, without the additional skill development offered by simulator training. The alternative will have to expand the amount of time spent and ammunition used by each student during range training to replace the degree of weapons familiarization and training provided by the simulators.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
		4	Lecture followed by FATS use (MTO 4).	This training alternative will include providing general information in a classroom followed by use of FATS to allow for the testing of all personnel (individually) given predetermined scenarios as part of weapons training. This training alternative will not provide the benefit of live-fire training.	Non-viable, this alternative is unable to provide the required level of training.
	1.6 Unarmed Self-Defense (Training Goal 1.6)				
		Goal			
			The goal of this training is to ensure that personnel have the proper knowledge of both offensive and defensive movements that they may employ against an opponent in a hand-to-hand combat situation.		
		Training Activity			
			This training activity includes instruction in unarmed self-defense and hand-to-hand combat techniques.		
		No Action			
			No Action (Baseline Conditions at FLW).	Training in this training goal at FLW is currently accomplished through the use of classroom instruction followed by training in hand-to-hand combat pits (training areas) and gyms.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
		Alternatives			
			RCP Alternative from FMC to FLW.	This alternative includes students learning the general principles of self-defense in the classroom. After learning the general principles students develop and demonstrate skill while training in teams of two on padded mats in a gym.	Viable, this alternative is able to provide the required level of training.
		1	Lecture (only) (MTO 1).	This alternative includes the use of only lecture instruction.	Non-viable, this alternative is unable to provide the required level of training.
		2	Exterior training area (MTO 2).	This alternative includes the use of general instruction classroom instruction concerning the general principles of self-defense. Students then demonstrate skill while training in an outdoor training area.	Non-viable, this alternative may result in training conditions unsafe for students.

Table IV.1: Training Goals Associated with Training Plans of Instruction				
Training Goal		**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
1.7 Urban Terrain (Training Goal 1.7)				
Goal				
		To ensure that personnel and units are able to function in urbanized terrain as well as more traditional rural environments.		
Training Activity				
		This training activity includes instruction on the proper methods for conducting military operations in an urbanized terrain including the proper methods to conceal approach, enter and secure buildings and patrol an urbanized area.		
No Action				
		No Action (Baseline Conditions at FLW).	Training in this activity at FLW is currently accomplished through the use of converted, deteriorated WW II era temporary wooden facilities. These facilities are located at the southern end of the cantonment area.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives				
		RCP Alternative from FMC to FLW.	This training alternative is based on students learning the general principles for both offensive and defensive maneuvers in urban terrain during classroom instruction. The students then develop and demonstrate skills at a specifically designed Military Operations in Urbanized Terrain (MOUT) facility developed to support this type of training.	Viable, this alternative is able to provide the required level of training.
	1	Lecture (only) (MTO 1).	This alternative includes the use of only lecture instruction, without the additional skill development offered by field/maneuver training.	Non-viable, this alternative is unable to provide the required level of training.
	2	Dedicated field/maneuver area (MTO 2).	This alternative includes the use of a range/maneuver area only, with obstacles placed to simulate an urban environment. This training alternative does not include the use of classroom instruction to indoctrinate students into the background information required to assist them in the development of required skills.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
3	Designed facility (MTO 3).	This training alternative allows students to develop and demonstrate skills in a MOUT training facility designed specifically to support this type of training, but lacks the classroom instruction required to provide the background information needed by students.	Non-viable, this alternative is unable to provide the required level of training and has the potential to result in unsafe training conditions.
1.8 Warfighting and Tactical Operations (Training Goal 1.8)			
Goal			
To ensure that personnel understand warfighting principles, understand the potential interplay of various independent actions in a wartime environment, and understand the importance and requirements for clear, concise, accurate and timely communications.			
Training Activity			
This training activity includes instruction on the proper command, control and communications methods for conducting tactical offensive and defensive military operations.			
No Action			
	No Action (Baseline Conditions at FLW).	Training in this activity at FLW is currently accomplished through the use of classroom instruction and the field/maneuver training exercises (on-post and on U.S. Forest Service lands within the installation boundary). Computer simulators which are designed to augment the classroom instruction and field training exercises are scheduled for installation and should be operational by the end of 1999.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
		Alternatives			
			RCP Alternative from FMC to FLW.	This alternative will include the use of classroom instruction to introduce students to the principles involved in the training goal. This training will be followed by the use of the computer simulators to allow students to obtain and demonstrate skills during controlled battlefield scenarios. This training is then augmented by the use of live-fire weapons training ranges and maneuver areas.	Viable, this alternative is able to provide the required level of training.
		1	Lecture (only) (MTO 1).	This alternative include the use of only lecture instruction, without the additional skill development offered by field/maneuver, live-fire weapons ranges and simulator training.	Non-viable, this alternative is unable to provide the required level of training.
		2	Field/ maneuver area (MTO 2).	This alternative will include the use of a live-fire weapons training ranges, but lacks associated classroom instruction designed to provide background information to personnel.	Non-viable, this alternative is unable to provide the required level of training.
		3	Simulator (MTO 3).	This training alternative will include providing general information in a classroom followed by use of simulators to allow for the testing of all personnel (individually and in groups) given both predetermined and specifically developed scenarios as part of battlefield operations training.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
2. BIOLOGICAL AGENT DETECTION (Training Activity Group No. 2)			
2.1 Biological Integrated Detection System (BIDS) Battlefield Employment and Operation (Training Goal 2.1)			
Goal			
To ensure that personnel understand the operation of the BIDS equipment and how to most effectively employ BIDS equipment. BIDS instruments are designed to help identify the potential presence of biological agents on a battlefield, thereby providing early warning to U.S. and allied forces so that proper defensive measures may be employed to limit the potential for contamination.			
Training Activity			
This training activity includes instruction on the use, employment and operation of the BIDS. The BIDS consists of and equipment package within a multipurpose shelter that is designed to be mounted on the rear of a High Mobility Multipurpose Wheeled Vehicle (HMMWV). A second HMMWV which carries cargo and tows a trailer is in a support role. The shelter contains all of the sampling and detection equipment. Using the equipment and *biological materials that simulate biological agents*, students will be trained on sampling, detection and identification of biological agents. The materials are naturally occurring bacteria, clay and proteins. The materials, as described in Volume III, Appendix B, are used in relatively small quantities and are not known to be toxic or pathogenic. Instruction will also include information on the potential impacts of biological weapons and the sensitivity of equipment to detecting these organisms. Students will also be trained on available communications equipment (Harris radio systems), driving and setting up the system, interpretation of meteorological data, navigation using the Global Positioning System (GPS) and the use of personal protective equipment while taking and analyzing samples.			
No Action			
	No Action (Baseline Conditions at FLW).	There is no training on the BIDS currently conducted at FLW.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal			Alternative Title	Alternative Description	Viable or Non-Viable
		Alternatives			
			RCP Alternative from FMC to FLW.	This alternative will include the use of classroom instruction to introduce students to the principles involved in the employment and use of the BIDS. This training will be followed by the use of component laboratories and BIDS simulator to allow students to obtain and demonstrate skills using the equipment in the BIDS during controlled scenarios. This alternative will involve the use of a small quantity of simulant in one component laboratory, in order to train students on the use of the detection system and during the field training exercise to validate the students' proficiency in an operational environment. The simulator training is then augmented by the use of an existing field/maneuver area to train personnel on the proper operation and use of the equipment. Simulant agents are used indoors and at exterior training field/maneuver areas.	Viable, this alternative is able to provide the required level of training.
		1	Lecture (only) (MTO 1).	This alternative includes the use of classroom instruction, without the additional skill development offered by field/maneuver and simulator training.	Non-viable, this alternative is unable to provide the required level of training.
		2	Field/ maneuver area (only) (MTO 2).	This alternative will include the use of a field/maneuver area to train personnel on the use of the BIDS. The training will include the use of a small quantity of simulant at the field/maneuver area, in order to train students on the use of the detection system. This alternative might involve a slightly greater possibility of accidental release of simulant agents at the field/maneuver area than the current practice.	Non-viable, this alternative is unable to provide the required level of training.
		3	Lecture and field/maneuver area training (MTO 3).	This alternative will include the use of a classroom followed by use of a field/maneuver area to train personnel on the use of the BIDS, but will not include the use of the simulator. This alternative will include the use of more simulant samples, at the field/maneuver area, in order to train students on the use of the detection system. This alternative might involve a slightly greater risk of accidental release of simulant agents at the field/maneuver area than the current practice.	Viable, this alternative is able to provide the required level of training.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
		4	Simulator (MTO 4).	This training alternative will include providing general information in a classroom followed by use of a simulator to allow for the testing of all personnel (individually and in groups) on predetermined and case-specific scenarios. This alternative will train students on the use and operation of the detection equipment. It would not allow the use of simulants.	Non-viable, this alternative is unable to provide the required level of training.
	2.2 BIDS Maintenance (Training Goal 2.2)				
		Goal			
			To ensure that personnel understand the proper maintenance procedures to use on the equipment contained in the BIDS equipment package.		
		Training Activity			
			This training activity includes instruction on the proper methods for maintaining the BIDS including the HMMWV on which it is mounted, the generator and trailer and all of the internal components except the Harris Radio, APS, flow cytometer, liquid sampler, XM2 Bio Sampler, threshold device, meteorological system, refrigerators, operators chairs, computer system and computer software. Maintenance of these items will be performed by a contractor until 2003; consequently, unit maintenance training for military personnel will not be required for these items.		
		No Action			
			No Action (Baseline Conditions at FLW).	There is no training on the BIDS currently conducted at FLW.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
		Alternatives			
			RCP Alternative from FMC to FLW.	This alternative includes the use of classroom instruction followed by the use of typical pieces of equipment to demonstrate general operator level maintenance procedures, with more detailed vehicle maintenance procedures demonstrated within a maintenance bay. Detailed equipment maintenance procedures involving the disassembly of component parts is accomplished by a contractor that developed the system.	Viable, this alternative is able to provide the required level of training.
		1	Lecture (MTO 1).	The alternative includes the use of lecture classroom instruction, but lacks the skill development and demonstration offered by performing maintenance.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
		2	Maintenance training (MTO 2).	This alternative includes the use of a maintenance bay for maintenance training, but will lack general classroom instruction.	Viable, this alternative is able to provide the required level of training.
		3	Simulated maintenance (MTO 3).	This alternative includes general classroom maintenance on proper maintenance procedures. This training will be augmented by the development and use of a maintenance simulator which will allow for students to perform maintenance in a controlled environment and on a specifically designed system that will replicate maintenance requirements.	Viable, this alternative is able to provide the required level of training.
		4	Modified RCP Alternative (MTO 4).	This alternative is identical to the Relocate Current Training Methods alternative, except that it will relocate the use of typical pieces of equipment from exterior paved areas to exterior training areas with improved stormwater control. The classroom, exterior and maintenance bay training segments of the training method will remain unchanged.	Viable, this alternative is able to provide the required level of training.
	2.3 Long Range Biological Standoff Detection System (LR-BSDS) Battlefield Employment and Operation (Training Goal 2.3)				
		Goal			
			To ensure that personnel understand the employment and operation of this equipment package. The LR-BSDS provides a long range-large area aerosol detection, tracking and mapping capability. The instruments in the package are designed to help identify the potential presence of biological agents on a battlefield, thereby providing early warning to the U.S. and allied forces so that proper defensive measures may be employed to limit the potential for contamination. The LR-BSDS consists of an equipment package that is designed to be mounted in a UH-60 helicopter.		
		Training Activity			
			This training activity includes instruction on the use, employment and operation of the LR-BSDS, however the system will not be used at FLW. Training will focus on the operation, maintenance, installation and removal and troubleshooting of the LR-BSDS; detection, discrimination and reporting of aerosol clouds; coordination of logistical support for LR-BSDS; UH-60 familiarization and safety features; general biological warfare subjects include discussion concerning biological warfare cloud movement and behavior characteristics and standoff detection operations.		

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
		Two LR-BSDS systems are programmed: • The P31 system will employ a laser operating at approximately 1.56 micrometers, an eye-safe wavelength region. The P31 system should be eye safe beyond 1 km, with the desired goal of being totally eye safe. • The NDI system utilizes a laser that is not eye safe and hazard reduction procedures must be developed. The estimated eye hazard distance under clear atmospheric conditions is 4.5 kilometers (km) for the unprotected eye and 10 km for the soldier using binoculars. Since the laser spot strikes the ground at a range of 10-30 km from the aircraft, the risk to personnel on the ground is limited. However, there is a clear risk to unwarned, unprotected aviators. Under this training method, training will occur in the classroom and simulator. Actual field training with an operational LR-BSDS will occur at the unit's home station, not at FLW; therefore, no laser sighting will occur at FLW. Additionally, since training will consist of classroom instruction of the theory behind the system and an introduction to the equipment no simulants are expected to be used during this portion of the training. Training on the detection of biological agents using the equipment will be conducted through a computerized system which is part of the LR-BSDS simulator.	
	No Action		
	No Action (Baseline Conditions at FLW).	There is no training on the LR-BSDS currently conducted at FLW.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
	Alternatives		
	RCP Alternative from FMC to FLW.	This alternative will include classroom instruction to introduce students to the principles involved in the employment and use of the LR-BSDS. This training will be followed by the use of a LR-BSDS simulator to allow students to obtain and demonstrate skills using the equipment in the LR-BSDS during controlled scenarios. The simulator training is then augmented by practice loading and unloading the equipment package from a UH-60 Blackhawk rotary wing aircraft (helicopter-aircraft or shell). Simulant agents are not used in this training method, or any of the MTOs proposed for this training goal.	Viable, this alternative is able to provide the required level of training.
1	Lecture (only) (MTO 1).	This alternative includes the use of classroom instruction, without the additional skill development offered by simulator training or use of a UH-60 (aircraft or shell) to practice loading and unloading operations.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
2	Field/ maneuver area (only) (MTO 2).	This alternative will include the use of a field/maneuver area, with a UH-60 (aircraft or shell) to practice loading and unloading operations, without the general classroom instruction or the use of the existing simulator.	Non-viable, this alternative is unable to provide the required level of training.
3	Lecture and field/maneuver area training (MTO 3).	This alternative will include the use of a classroom followed by use of a field/maneuver area, with a UH-60 (aircraft or shell) to practice loading and unloading operations, but will not include the use of the existing simulators. Since simulators will not be used, it will be necessary to use the operational, non-eye safe lasers.	Non-viable, this alternative could result in unsafe training conditions.
4	Simulator (MTO 4).	This training alternative will include providing general information in a classroom followed by use of a simulator to allow for the testing of all personnel (individually and in groups) on predetermined and case-specific scenarios. The alternative will not include the use of a UH-60 (aircraft or shell) to practice loading and unloading operations.	Non-viable, this alternative is unable to provide the required level of training.
2.4 Long Range Biological Standoff Detection System (LR-BSDS) Maintenance (Training Goal 2.4)			
Goal			
	To ensure that personnel understand the proper maintenance procedures to use on the equipment contained in the LR-BSDS equipment package.		
Training Activity			
	This training activity includes instruction on the maintenance of the LR-BSDS. Training will focus on the maintenance and troubleshooting of the LR-BSDS and coordination of logistical support for LR-BSDS.		
No Action			
	No Action (Baseline Conditions at FLW).	There is no training on LR-BSDS maintenance currently conducted at FLW.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal			Alternative Title	Alternative Description	Viable or Non-Viable
		Alternatives			
			RCP Alternative from FMC to FLW.	This alternative includes the use of classroom instruction followed by the use of typical pieces of equipment to demonstrate general operator level maintenance procedures, with more detailed vehicle maintenance procedures demonstrated within a maintenance bay. Detailed equipment maintenance procedures involving the disassembly of component parts is accomplished by the contractor that developed the system.	Viable, this alternative is able to provide the required level of training.
		1	Lecture (MTO 1).	The alternative includes the use of lecture classroom instruction, but lacks the skill development and demonstration offered by performing maintenance.	Non-viable, this alternative is unable to provide the required level of training.
		2	Maintenance training (MTO 2).	This alternative includes the use of a maintenance bay for maintenance training, but will lack general classroom instruction.	Viable, this alternative is able to provide the required level of training.
		3	Simulated maintenance (MTO 3).	This alternative includes general classroom maintenance on proper maintenance procedures. This training will be augmented by the development and use of a maintenance simulator which will allow for students to perform maintenance in a controlled environment and on a specifically designed system that will replicate maintenance requirements.	Viable, this alternative is able to provide the required level of training.

Table IV.1: Training Goals Associated with Training Plans of Instruction			
Training Goal	**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
3. NUCLEAR, BIOLOGICAL and CHEMICAL (NBC) RECONNAISSANCE OPERATIONS (Training Activity Group 3)			
3.1 FOX Battlefield Employment and Operation (Training Goal 3.1)			
Goal			
To ensure that personnel understand the operation of the M93 NBC Reconnaissance System FOX vehicle system and are able to effectively employ the system when needed. The M93 FOX vehicle is designed to allow the operators to test air and soil samples for the presence of chemical agents that might have been employed by enemy forces. If chemical agents are present, the vehicle operators are able to mark the area with flags so that "friendly" force personnel are able to don proper personal protective equipment and/or avoid the area.			
Training Activity			
This training activity includes instruction on the use, employment capabilities and operation of the M93 FOX vehicle and chemical detection system, using *simulated chemical agents*. The simulated chemical agents will be used in both interior and exterior environments. The simulants are used in small quantities, controlled conditions, and have low toxicity levels. The chemical simulants do not biomagnify and are attenuated by the environment quickly because they are readily degraded by microbes, are volatile, photodecompose, are quickly metabolized and/or readily excreted. The majority of the simulants, even in large quantities or high doses, are not considered carcinogens. The M93 FOX is a self-contained vehicle. The M93 FOX is a German designed and constructed vehicle (that is approximately 9 feet wide, 25 feet long and 8 feet tall) capable of operation on both land and in an amphibious environment, although amphibious training is limited to driver operations only. Vehicle operations training will include day-time operations and night-time operations, including the use of night-vision goggles. This training activity includes instruction on the use, employment capabilities and operation of the M93 FOX vehicle and chemical detection system.			
No Action			
	No Action (Baseline Conditions at FLW).	There is no training on the M93 FOX vehicle system currently conducted at FLW.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
Alternatives			
	RCP Alternative from FMC to FLW.	This alternative will include the use of classroom instruction to introduce students to the principles involved in the training goal. This training will be followed by the use of the M93 FOX simulator to allow students to obtain and demonstrate skills during controlled scenarios. This alternative will involve the use of a small quantity of simulant agent in the simulator area, in order to train students on the use of the detection system. Simulants used in M93 FOX training include Diethyl phthalate, Benzaldehyde, Cyclohexanone, Eucalyptol, Methyl Salicylate (MES), Diethyl Malonate (DEM), Dimethyl Phthalate, Ammonia, Acetone, Ethyl Phthalate, Isopropyl, and Anisole. These substances are designed to allow detection equipment to function properly without requiring the use of chemical agents. The simulator training is then augmented by the use of an existing field/maneuver area to train personnel on the use and operation of the equipment. Simulated agents are used in a controlled manner in the field but are not freely released into the environment.	Viable, this alternative is able to provide the required level of training.
1	Lecture (only) (MTO 1).	This alternative includes the use of lecture classroom instruction, without the additional skill development offered by field/maneuver and simulator training.	Non-viable, this alternative is unable to provide the required level of training.
2	Field/ maneuver area (only) (MTO 2).	This alternative will include the use of a field/maneuver area to train personnel on the use of the M93 FOX system. Training will include the use of a small quantity of simulant agent at the field/maneuver area in order to train students on the use of the detection system. Training at the maneuver area will not be augmented with classroom or simulator training; consequently the quantity of simulant agent that will be required at the filed/maneuver area will be larger than the quantity used in the RCP Alternative or other alternative methods that include classroom and component lab training.	Non-viable, this alternative is unable to provide the required level of training.
3	Field/ maneuver area (MTO 3).	This alternative will include the use of a classroom followed by use of a maneuver area to train personnel on the use of the M93 FOX system. This alternative will include the use of a small quantity of simulant agent at the field/maneuver area in order to train students on the use of the detection system.	Viable, this alternative is able to provide the required level of training.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
		4	Simulator use (MTO 4).	This training alternative will include providing general information in a classroom followed by use of a simulator to allow for the testing of all personnel (individually and in groups) on predetermined and case specific scenarios. This alternative will include the use of a small quantity of simulant agent at the simulator in order to train students on the use and operation of the detection equipment.	Non-viable, this alternative is unable to provide the required level of training.
	3.2 FOX Maintenance (Training Goal 3.2)				
		Goal			
			To ensure that personnel understand and are able to perform maintenance on the M93 FOX vehicle and the communications and test equipment that is contained in the vehicle.		
		Training Activity			
			This training activity includes instruction on the proper methods vehicle operators should use for maintaining the M93 FOX system and vehicle. Included in this instruction is information concerning the proper maintenance of the vehicle and the monitoring, testing and communication equipment mounted on the vehicle.		
		No Action			
			No Action (Baseline Conditions at FLW).	There is no training on the M93 FOX system currently conducted at FLW.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
		Alternatives			
			RCP Alternative from FMC to FLW.	The alternative includes the use of classroom instruction followed by the use of typical pieces of equipment to demonstrate proper maintenance procedures and actual hands-on equipment maintenance by students to demonstrate proficiency.	Viable, this alternative is able to provide the required level of training.
		1	Lecture (MTO 1).	The training alternative includes the use of lecture classroom instruction, but lacks the additional skill development offered by performing maintenance on the equipment.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
		2	Maintenance training (MTO 2).	This alternative includes the use of a maintenance bay for maintenance training, but will lack general classroom instruction.	Viable, this alternative is able to provide the required level of training.
		3	Simulated Maintenance (MTO 3).	This alternative includes the development and use of a maintenance simulator which will allow for students to perform maintenance in a controlled environment and on a specifically designed system that will replicate maintenance requirements.	Viable, this alternative is able to provide the required level of training.
		4	Modified RCP Alternative (MTO 4).	This alternative is identical to the RCP Alternative, except that it will relocate the use of typical pieces of equipment for exterior asphaltic concrete paving area that might lack stormwater control to exterior training areas with improved stormwater control. The classroom, exterior and maintenance bay training segments of the training method will remain unchanged.	Viable, this alternative is able to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
4. GENERAL MILITARY TRAINING (Training Activity Group No. 4)			
4.1 General Military Training (Training Goal 4.1)			
Goal			
	To ensure that personnel understand the operation of the military, what actions are expected and what benefits may be expected as a result of actions. Additionally, this training concentrates on ensuring that each individual possesses a set of basic skills that will be needed throughout their career.		
Training Activity			
	This training activity includes instruction in: Code of Conduct; oral and written communications; military customs and courtesies; first aid; leadership skills; military organizational structure and the proper use of the Chain-of-Command; preventive medical and personal hygiene; military rights and responsibilities; military standards of conduct and personal behavior; time management; Total Army Quality; the Uniform Code of Military Justice; and an introduction to Military Law.		
No Action			
	No Action (Baseline Conditions at FLW).	Training in this training goal at FLW is currently accomplished through the use of classroom instruction, augmented by training aids that are brought into the classroom to help demonstrate the subject matter being discussed. Instruction in these areas is conducted in much the same manner as classes taught at civilian high schools or colleges. Individual classes may include either formal lectures, informal lectures, discussion sessions, informal working groups, or a combination of each.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW.	This training alternative includes lectures in a general instruction classroom which are augmented by training aids that are brought into the classroom to help demonstrate the subject matter being discussed. Instruction in these areas is conducted in much the same manor as classes will be taught at civilian high schools or colleges. Individual classes may include either formal lectures, informal lectures, discussion sessions, informal working groups, or a combination of each.	Viable, this alternative is able to provide the required level of training.
1	Lecture (MTO 1).	This alternative will include lecture classroom instruction (only) without the use of training aids.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal			Alternative Title	Alternative Description	Viable or Non-Viable
		2	Field/ maneuver training (MTO 2).	This alternative will eliminate the use of classroom instruction and relocate all training activities to exterior training areas.	Non-viable, this alternative is unable to provide the required level of training.
	4.2 General Military Training, Field Training (Training Goal 4.2)				
		Goal			
			In addition to the information presented under goal 4.1, this training concentrates on physical skills that each person must have.		
		Training Activity			
			This training activity includes instruction in: drill and ceremony; defensive procedures; operational tactics; and land navigation (including global positioning systems, map reading and field/maneuver exercises).		
		No Action			
			No Action (Baseline Conditions at FLW).	Training in this training goal at FLW is accomplished through the use of classroom instruction, instruction in exterior training areas and the instruction during field/maneuver training exercises (on-post and on U.S. Forest Service lands within the installation boundary).	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
		Alternatives			
			RCP Alternative from FMC to FLW.	This training alternative includes lectures in a general instruction classroom which are augmented by the development and demonstration of skill during additional field/maneuver training.	Viable, this alternative is able to provide the required level of training.
		1	Lecture (MTO 1).	This alternative will include only lecture instruction, without the skill development offered by field/maneuver training.	Non-viable, this alternative is unable to provide the required level of training.
		2	Field training (MTO 2).	This alternative will include the use of an exterior training area, with no general classroom instruction.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
		3	Computer simulation (MTO 3).	Under this training alternative, classroom training will be augmented by the development and use of a computer driven simulator. Use of the simulator will allow for control of lighting and sound, thereby resulting in a more realistic training environment.	Non-viable, this alternative is unable to provide the required level of training.
4.3 General Military Training, NBC Personal Protective Equipment (Training Goal 4.3)					
		Goal			
			To ensure that each individual is able to identify and don their protective equipment and work as a member of a decontamination team. NBC Personal Protective Equipment is designed to limit the potential for contamination in the presence of NBC agents on a battlefield.		
		Training Activity			
			This training activity includes instruction in the proper maintenance and use of NBC Personal Protective Equipment. Equipment normally used in this training includes individual air filtration canisters; protective masks (M17, M24, M24A1, M25A1, M40, M42, M43 and XM45 protective masks); battle dress overgarment (BDO) chemical protective gear including pants, blouses, boots and gloves; CWU 77/P chemical protective coveralls; and toxicological agent protective suit.		
		No Action			
			No Action (Baseline Conditions at FLW).	Training in this training goal at FLW is currently accomplished through the use of classroom instruction, instruction in exterior training areas, instruction during field/maneuver training exercises and fit testing of the gas mask through the use of banana oil, CS (tear) gas and in a CS chamber. Personnel are first instructed on the general principles involved; they learn how to don and doff the equipment; they are provided a fit test; they are instructed on how to decontaminate themselves, other personnel, their equipment and unit equipment; and they are taught how to detect signs of contamination in themselves and their counterparts and to provide initial first aid.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
Alternatives			
RCP Alternative from FMC to FLW.		This training alternative includes lectures in a general instruction classroom which provides information concerning the use and care of NBC equipment. This training is followed by instruction on the proper methods for donning, doffing and fit testing the equipment. Following practice at donning, doffing and fit testing the equipment students are placed into a CS chamber (filled with CS gas) to demonstrate the effectiveness of the protective equipment.	Viable, this alternative is able to provide the required level of training.
1	Field training without a CS chamber (MTO 1).	This training alternative includes lectures in a general instruction classroom which provides information concerning the use and care of NBC equipment. This classroom training is augmented by instruction on the proper methods for donning and doffing the equipment. This alternative will not include fit testing or the use of the CS chamber to demonstrate the effectiveness of the protective equipment.	Non-viable, this alternative is unable to provide the required level of training.
2	Lecture (MTO 2).	This alternative will include only lecture instruction, but will not include the additional skill development offered by fit testing and using the equipment.	Non-viable, this alternative is unable to provide the required level of training.
3	Field/ maneuver training (MTO 3).	This alternative will include the use of an exterior training area (with no classroom) for instruction on the proper methods for donning, doffing and fit testing the equipment. Following practice donning and doffing the equipment, students will be fit tested and placed into a CS chamber (filled with CS gas) to demonstrate the effectiveness of the protective equipment.	Viable, this alternative is able to provide the required level of training.
4.4 Signals and Other Non-Verbal Forms of Communications (Training Goal 4.4)			
Goal			
To ensure that personnel are able to communicate when verbal communication is not possible or preferred.			
Training Activity			
This training activity includes instruction in the proper methods for non-verbal forms of communications including hand and body signals; signaling with lights, flares and flags; and non-verbal body gestures.			

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
No Action			
	No Action (Baseline Conditions at FLW).	Training in this training goal at FLW is currently accomplished through the use of classroom instruction, instruction in exterior training areas and instruction during field/maneuver training exercises (on-post and on U.S. Forest Service lands within the installation boundary). Personnel are first instructed on the general principles involved and then they are provided an opportunity to demonstrate and develop skills in using the signals.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW.	This training alternative includes lectures in a general instruction classroom which is augmented by instructor demonstrations and student exercises of non-verbal forms of communication.	Viable, this alternative is able to provide the required level of training.
1	Lecture (only) (MTO 1).	This alternative will include lecture classroom instruction.	Non-viable, this alternative is unable to provide the required level of training.
2	Field/ maneuver training (MTO 2).	This alternative will include the use of an exterior training area to provide general instruction, skill development and skill demonstrations.	Viable, this alternative is able to provide the required level of training.
4.5 Radio Communications, including secure communications (Training Goal 4.5)			
Goal			
	To ensure that personnel are able to use radio communication when direct verbal or non-verbal communication is not possible or preferred.		
Training Activity			
	This training activity includes instruction in the proper methods for both secure and non-secure radio communications. Instruction includes the use of the Harris and SINGARS radio systems; reading and writing as well as transmitting and receiving military messages; encoding and decoding messages including use of the KTC 600 Tactical Operations Code; and use of electronic countermeasures and the AN/VIC 1 intercommunication set (on the M93 FOX).		

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
No Action			
No Action (Baseline Conditions at FLW).		Training in this training goal at FLW is accomplished through the use of classroom instruction, instruction in exterior training areas and instruction during field/maneuver training exercises (on-post and on U.S. Forest Service lands within the installation boundary). Personnel are first instructed on the general principles involved and then they are provided an opportunity to demonstrate and develop skills in radio communications.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW .	This training alternative includes lectures in a classroom which are augmented by the use of a communications lab. The communications lab is equipped with radio equipment that is connected (via wire) to a control system. This system allows students to communicate with each other and the instructors, without making actual radio transmissions.	Viable, this alternative is able to provide the required level of training.
1	Lecture (only) (MTO 1).	This alternative will include lecture instruction.	Non-viable, this alternative is unable to provide the required level of training.
2	Field training (MTO 2).	This alternative will include outdoor instruction and the use of an exterior training area, with students provided individual field radios.	Viable, this alternative is able to provide the required level of training.
4.6 Computer Operations (Training Goal 4.6)			
Goal			
	To ensure personnel have a basic understanding of computer systems and the software that they will be expected to use.		
Training Activity			
	This training activity includes instruction in the proper use of personal computers, including the use of both commercial and specifically designed software packages.		
No Action			

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
	No Action (Baseline Conditions at FLW).	Training in this training goal at FLW is accomplished through the use of classroom instruction, followed by training in specifically designed computer labs. These labs include individual student work station equipped with computers that are connected to printers. Students are first instructed on the general principles involved in using computers and then they are provided an opportunity to demonstrate and develop skills in the use of commercially available and specifically designed software packages.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW.	This training alternative includes lectures in a general instruction classroom which are augmented by the use of computer labs. The computer labs are designed to foster instruction on the use of personal and main-frame computers and on the use of both commercially available and military specific software programs which students will be required to use. Personal computers at the Military Police School and Chemical School have resident software and operate independently of each other. In some cases this limits the value of training because the computer hardware is not advanced enough to foster effective use of the current software packages.	Viable, this alternative is able to provide the required level of training.
1	Lecture (only) (MTO 1).	This alternative will include lecture instruction, without the additional skill training offered by computer lab training.	Non-viable, this alternative is unable to provide the required level of training.
2	Computer lab training (MTO 2).	This alternative will include the use of only a computer lab for the instruction of students.	Viable, this alternative is able to provide the required level of training.
3	Computer lab with the computers tied to a network (MTO 3).	This training alternative is very similar to the RCP Alternative and includes classroom instruction augmented by the use of computer labs. This alternative will include the use of a computer network with a centralized computer server. The server will allow for the relocation of the software to a centralized location; thereby freeing up local hard-drive space to support other memory requirements. This will expand the capabilities of the existing computer hardware, foster future introductions of new software and allow for more efficient and effective training.	Viable, this alternative is able to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
4.7 Physical Fitness and Total Fitness (Training Goal 4.7)			
Goal			
To reinforce the importance of personal health through exercise and preventative measures (such as reduced use of tobacco and alcohol products) and to ensure that all personnel are able to meet minimum personal fitness requirements.			
Training Activity			
This training activity includes instruction on the U.S. Army Physical Readiness Program, including the performance of specified physical exercises. The Total Fitness program expands the physical fitness program to include instruction on: the importance of a regular physical training program and health benefits awareness; prevention of future medical problems through limiting personal use of tobacco, alcohol and drugs; drug and alcohol abuse awareness training; and prevention of sexually transmitted diseases.			
No Action			
	No Action (Baseline Conditions at FLW).	Training in this training goal at FLW is currently accomplished through the use of classroom instruction and through the use of physical training areas. Classroom training includes the use of training aids to help students visualize the information being discussed. Physical training exercises are conducted at training areas located throughout the installation, including the use of gyms and pole barns (to keep exercise areas dry).	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW.	This training alternative includes lectures in a general instruction classroom which are augmented by the development and demonstration of physical skills through both organized and individual physical training in gyms, training areas (and pole barns) and along fitness trails and installation roadways.	Viable, this alternative is able to provide the required level of training.
1	Lecture (only) (MTO 1).	This alternative will include only lecture instruction, without the additional physical and skill development offered by exercises in gyms, pole barns, exterior training areas, or along the installations roadways and trails.	Non-viable, this alternative is unable to provide the required level of training.
2	Field training (MTO 2).	This alternative will include the use of an exterior training area, with no general classroom Instruction.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
5. MILITARY POLICE PROCEDURES (Training Activity Group No. 5)			
5.1 Basic Military Police Functions (Training Goal 5.1)			
Goal			
To instruct personnel on basic military justice issues including the use and enforcement of the Uniform Code of Military Justice; and proper procedures to be used by Military Police personnel.			
Training Activity			
This training activity includes instruction in Arms room operations; Confinement facility and Enemy Prisoner-of-War Operations; crime scene investigations; crime scene response; domestic law enforcement; domestic violence including spouse and child abuse investigation and response; evidence chain-of-custody requirements; evidence storage; interview and interrogation of personnel; patrol procedures; and physical security and crime prevention. Training includes the use of actual and mock police equipment that will be issued for pedestrian and vehicle patrols and fingerprinting equipment. Training includes the use of: actual and mock police equipment that will be issued to pedestrian and vehicle patrols, including personal protective equipment and body armor, modular personal body armor, inconspicuous body armor and shin/knee guards for riot control; and mock training aids designed to add realism to crime scenes and incident response.			
No Action			
	No Action (Baseline Conditions at FLW).	Training in this training goal at FLW is currently limited to refresher training for the installation military police company/force. This refresher training is accomplished through the use of classroom instruction, instruction during patrols, through the use of actual crime scenes and investigations and through the review of lessons learned.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW .	This alternative includes the use of a general instruction classroom to provide instruction on background information and the principles to be used in Military Police operations. This training is followed by more specific training on the individual types of actions which may be required. Mock crime and investigation scenes are used to allow for development of specific skill that the individual will be required to have during actual patrol.	Viable, this alternative is able to provide the required level of training.
1	Lecture (only) (MTO 1).	This alternative includes the use of only lecture instruction, but will lack the skill development and demonstration offered in the mock facilities.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
		2	Field training (MTO 2).	This alternative includes the use of a ride-along program where students join trained personnel in responding to actual military police calls.	Non-viable, this alternative is unable to provide the required level of training and has the potential to result in unsafe training conditions.
		3	Mock response and investigation scenes (MTO 3).	This alternative includes the use of mock crime and investigation scenes to develop specific skills that the individual will be required to have during actual patrol, but will not include classroom instruction.	Non-viable, this alternative is unable to provide the required level of training.
	5.2 Advanced Law Enforcement and Operations Other-than-War (Training Goal 5.2)				
		Goal			
			To expand individual skills in basic military police operations and to ensure that students understand the full range of typical Operations Other-than-War to which personnel may be required to respond. Typical Operations Other-than-War include humanitarian disaster relief operations, peacekeeping operations, counter narcotics and civil disturbances.		
		Training Activity			
			This training activity includes more advanced training in the items included in item 5.1 plus more detailed instruction in Operations Other-than-War, Crime Scene Investigations, Spouse and Child Abuse Investigations, Hostage Negotiations, Incident Investigations, Protective Services, Special Reaction Team Operations, Tactical Response, Counterdrug Procedures and Counterterrorism Procedures. In addition to using the training aids and items listed in item 5.1 this training goal includes the use of: mid-sized riot control dispenser; stun hand grenade (diversionary device); less than lethal 400 mm grenade; less than lethal 5.56 mm cartridge; 40 mm canister cartridge; mobile detection assessment and response system; integrated commercial intrusion detection system; personnel area marking system; portable sign making kit; and high value item security system; fingerprinting equipment including volatile chemicals used to extract fingerprints; portable radios; surveillance kits including radios; Becton-Dickerson Test Kits (A, E, G and J); two-channel, six-channel and H33XP1120 hand-held transmitters and receivers; chemical light sticks; red marking simulations; paint guns (SMG-80) and .62 caliber paint balls; dueltron targets; paint mine booby traps; flexicuffs; modular telephone recording control devices and equipment; and TA 312 Field Phones.	

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
		No Action			
			No Action (Baseline Conditions at FLW).	Training in this training goal is not currently accomplished at FLW .	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
		Alternatives			
			RCP Alternative from FMC to FLW.	This training alternative includes lectures in a general instruction classroom which are augmented by training aids that are brought into the classroom to help demonstrate the subject matter being discussed. Students are also trained in mock training scenes designed to resemble crime scenes.	Viable, this alternative is able to provide the required level of training.
		1	Lecture (only) (MTO 1).	This alternative includes the use of only lecture instruction, but will lack the skill development and demonstration offered in the mock facilities.	Non-viable, this alternative is unable to provide the required level of training.
		2	Field training (MTO 2).	This alternative includes the use of a ride-along program where students join trained personnel in responding to actual military police calls.	Non-viable, this alternative is unable to provide the required level of training,
		3	Mock response and investigation scenes (MTO 3).	This alternative includes the use mock crime and investigation scenes to develop specific skills that the individual will be required to have during actual patrol, but will not include classroom instruction.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
6. NUCLEAR BIOLOGICAL AND CHEMICAL (NBC) PROCEDURES (Training Activity Group No. 6)			
6.1 NBC Procedures (Training Goal 6.1)			
Goal			
To ensure that students understand the proper procedures to use following the release of NBC agents.			
Training Activity			
This training activity includes instruction in: NBC Accident Response and Base Recovery; NBC Contingency Support; and NBC Detection and Reconnaissance. Related to the goals are required communications skills including the requirements for and procedures to, notify the chain-of-command of potential and actual NBC incidents. Interpretation of meteorological data and atmospheric conditions is also included in the training in order to allow personnel to identify and track potential areas of contamination. This training includes information on the use and deployment of the M8 and M8A1 chemical agent alarm system; and the use of the AN/VDR 2 Radiac Sets and M256 and M256A1 chemical agent detector kits. Students are instructed on the performance of these actions and in the operation and maintenance of these pieces of equipment while wearing regular uniforms and while wearing personal NBC protective equipment (as listed in item 4.3 above).			
No Action			
	No Action (Baseline Conditions at FLW).	Training in this training goal at FLW currently includes classroom and field/maneuver training on NBC response procedures. The field/maneuver training includes the use of small quantities of colored smoke (released from smoke grenades and canisters) but does not involve the use of radiological isotopes, or chemical or biological agents. Training similar to that conducted by the U.S. Air Force at the Chemical School involving Accident Response and Based Recovery is not currently accomplished at FLW .	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			Alternative Title	Alternative Description	Viable or Non-Viable
		Alternatives			
			RCP Alternative from FMC to FLW .	This alternative includes the use of a general instruction classroom to provide instruction on background information and the principles to be used in Accident Response and Base Recovery and battlefield response. Accident Response and Base Recovery classroom training is followed by more specific training on the individual types of actions which may be required at a mock airfield, where students are required to develop and demonstrate specific skills. This training is conducted outside under controlled conditions and includes the use of small quantities of radiological isotopes and simulated chemical agents. Classroom training for battlefield response procedures is augmented through the use of training and maneuver areas. The training is integrated with other field/maneuver exercises and is simulated. This training includes the use of small quantities of colored smoke (released from smoke grenades and canisters) but does not involve the use of radiological isotopes, or chemical or biological agents.	Viable, this alternative is able to provide the required level of training.
		1	Lecture (only) (MTO 1).	This alternative includes the use of only lecture instruction, without the additional skill development offered by field/maneuver training.	Non-viable, this alternative is unable to provide the required level of training.
		2	Field/ maneuver area training (MTO 2).	This alternative includes the use of a mock airfield and field/maneuver areas, but will not include classroom instruction.	Non-viable, this alternative is unable to provide the required level of training.
		3	Training at an Active Airfield (MTO 3).	This alternative includes the use of a general instruction classroom to complete similar training to that discussed in the RCP Alternative above, but will provide for field/maneuver training at a active airfield (in lieu of a mock airfield) and at field/maneuver areas.	Non-viable, this alternative will present undue safety risks to personnel in training and to personnel involved in aircraft operations.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal			Alternative Title	Alternative Description	Viable or Non-Viable
		4	Simulation of Radiological Effects (MTO 4).	This alternative includes the use of a general instruction classroom to complete similar training to that discussed in the RCP Alternative above, but will provide for field/maneuver training using equipment (such as the AN/TDQ-T1(V) continuous wave radio transmitter) to simulate the effects of radiological materials.	Viable, this alternative is able to provide the required level of training.
	6.2 NBC Equipment (Training Goal 6.2)				
		Goal			
			To ensure that students understand the proper operation and use of NBC detection and monitoring equipment.		
		Training Activity			
			This training activity includes instruction in: Equipment Decontamination; Personnel Decontamination; Personal Protective Equipment (including the items listed in item 4.3) use, donning, doffing and fit testing; and Protective Equipment Proficiency Test using a gas chamber filled with an irritant (CS - tear gas). Training includes instruction on the operational capabilities and maintenance of the: M12A1, 15 gallon-per-minute and 65 gallon-per-minute pumps; M41 Protective Assessment Test System (PATS); AN/PDR-75 (consisting of the DT-236/CP696); AN/VDR-2 Radiac Detector sets; AN/UDR13 Pocket Radiac; Multipurpose Integrated Chemical Agent Alarm; Automated Chemical Agent Alarms including the XM19 and XM22; M21 Remote Sensing Chemical Agent Alarm; Improved Chemical Agent Monitor; Chemical Biological Training Simulant and Delivery System; IM174 series Radiacmeter and VDR-2; IM93 or IM147 Dosimeter; PP1578 series charger; M8A1 chemical agent alarm system; M17 lightweight decontamination system; M256 and M256A1 Chemical Agent Detection Systems; M291 Skin/Equipment decontamination kit; and AN/VPS 7 Night Vision Goggles. Air Force equipment includes the Automatic Liquid Alarm Detector, Chemical Agent Monitor and the ADM-300 RADIAC. Students are instructed on the operation and maintenance of these pieces of equipment while wearing regular uniforms and while wearing personal NBC protective equipment .	

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal			Alternative Title	Alternative Description	Viable or Non-Viable
		No Action			
			No Action (Baseline Conditions at FLW).	Training in this training goal currently includes classroom and field/maneuver training on the use and maintenance of NBC equipment. The field/maneuver training does not involve the use of radiological isotopes, or chemical or biological agents, but does include the use of simulants, CS (Tear) gas grenades and grenades filled with colored smoke. Personnel are instructed on the use of their personal protective equipment, practice donning and doffing the equipment and are fit tested to ensure the equipment is being properly worn. Personnel are also provided a fit test in a gas chamber (filled with CS (Tear) gas) to demonstrate the effectiveness of the equipment. Following this training students are instructed on how to decontaminate other personnel and equipment by using readily available and specifically designed decontamination equipment. This training is conducted at on-post and off-post maneuver training areas during field/maneuver exercises. Additionally during this training students are required to perform the tasks while wearing no NBC protection and while wearing full NBC individual protective equipment.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
		Alternatives			
			RCP Alternative from FMC to FLW.	This training alternative includes lectures in a General Instruction classroom which provides information concerning the use and care of NBC equipment. This training is followed by instruction on the proper maintenance and use of personal protective equipment (including use in a CS chamber filled with CS (tear) gas). Following demonstration of proficiency with the individual personal protective equipment, students are instructed on the proper use of decontamination equipment at field/maneuver training areas and at the Decontamination Apparatus Training Facility (DATF) in interior, covered and exterior training areas. This training is conducted in normal uniforms and in full NBC personal protective equipment.	Viable, this alternative is able to provide the required level of training.
		1	Lecture (only) (MTO 1).	This alternative will include only lecture instruction, but will not include the use of equipment for proficiency demonstration.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
		2	Field training (MTO Training - Option 2).	This alternative will include the use of covered and exterior training areas, with no general classroom instruction. This training will provide instruction on the proper methods for maintenance and use of the personal protective equipment and NBC decontamination equipment. The alternative will include actual hands-on practice with the equipment while wearing normal uniforms and in full NBC personal protective equipment.	Non-viable, this alternative is unable to provide the required level of training and may result in unsafe training conditions.
	6.3 NBC, Decontamination, Advanced Proficiency Test (Toxic Agent) (Training Goal 6.3)				
		Goal			
			To build confidence in individual chemical specialists that they have the required skills to detect and identify chemical agents; decontaminate and return to use equipment that may have been contaminated; and decontaminate themselves and their team members. Chemical specialists will develop confidence that their protective equipment will prevent them from being affected by the toxic agent.		
		Training Activity			
			This training activity includes advanced proficiency demonstration in decontamination of personnel and equipment. Included in this training are: refresher training on the proper use, care and maintenance of personal NBC equipment; practice on proper donning and doffing procedures; practice on decontaminating personnel and equipment in a non-contaminated environment; and training in an area designed to simulate the floor plan of the actual toxic-agent training facility bays to allow a thorough pre-briefing to students on the procedures which will be followed during the toxic-agent training. The training uses *amyl acetate/stannic chloride* (simulated chemical agents) for fit-testing of equipment (in accordance with DA Pam 385-61. Minute quantities of *toxic chemical agents (GB and VX)* (approximately 1.0 ml of VX per 8 training bays for a total of 8.0 ml per training event; and 0.2 ml of GB per 8 training bays for a total of 1.6 ml per training event) are also used in a controlled environment as part of the training. As part of the proficiency demonstration required to graduate from this training students must don and fit-test their personal protective equipment; correctly locate, identify and then decontaminate a piece of equipment as part of a decontamination team; and finally decontaminate themselves and members of their team. This training is designed to augment the information provided to all branches of the U.S. military, allied nations personnel, civil service and civilian sectors and sharpen the proficiency skill of Chemical Specialists.		
		No Action			
			No Action (Baseline Conditions at FLW).	Training in this training goal is not currently accomplished at FLW .	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
		Alternatives			
			RCP Alternative from FMC to FLW.	This training alternative includes lectures in a general instruction classroom to provide information to personnel concerning the use and care of NBC equipment. This training is designed to refresh and augment the information provided to all military personnel and sharpen the proficiency skill of Chemical Specialists. This classroom training is followed by dress rehearsals in protective equipment in interior and exterior training areas and introduction of a toxic-agent into a controlled training environment. The students then detect, identify and decontaminate a personnel and equipment (in either lock-step or scenario driven exercises) as part of their skill proficiency demonstration.	Viable, this alternative is able to provide the required level of training.
		1	Lecture (only) (MTO 1).	This alternative will include only lecture instruction, but will not include the donning and doffing of equipment or training in a toxic-agent environment.	Non-viable, this alternative is unable to provide the required level of training.
		2	Toxic-agent training (only) (MTO 2).	This alternative will include completion of only the toxic-agent portion of the training discussed in RCP Alternative above. The classroom/refresher training will not be included in the training cycle.	Non-viable, this alternative is unable to provide the required level of training and has the potential to result in unsafe training conditions.
		3	Proficiency testing without a toxic-agent (MTO 3).	This training alternative includes lectures in a general instruction classroom which provides additional information and refresher training concerning the use and care of NBC equipment. This training is designed to augment the more general information provided to all military personnel and sharpen the proficiency skills of Chemical Specialists. This basic training is followed by more dress rehearsals in protective equipment in interior and exterior training areas, but will not include training in a toxic environment.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal			Alternative Title	Alternative Description	Viable or Non-Viable
		4	Proficiency testing with a simulated toxic-agent (MTO Training - Option 4).	This training alternative includes lectures in a general instruction classroom which provides additional information and refresher training concerning the use and care of NBC equipment. This training is designed to augment the more general information provided to all military personnel and sharpen the proficiency skills of Chemical Specialists. This basic training is followed by more dress rehearsals in protective equipment in interior and exterior training areas and introduction of a simulant toxic-agent into a controlled training environment. The students then detect, identify and decontaminate the environment as part of their skill proficiency demonstration.	Non-viable, this alternative is unable to provide the required level of training.
		5	Proficiency testing in a controlled exterior training area (MTO 5).	This training alternative includes lectures in a general instruction classroom which provides additional information and refresher training concerning the use and care of NBC equipment. This training is designed to augment the more general information provided to all military personnel and sharpen the proficiency skill of Chemical Specialists. This basic training is followed by more dress rehearsals in protective equipment in interior and exterior training areas and introduction of a toxic-agent into a controlled exterior training environment. The students then detect, identify and decontaminate the environment as part of their skill proficiency demonstration. This alternative might result in an increased potential for environmental damage when compared to the current training practices use at FMC.	Non-viable, this alternative could result in unsafe human health and environmental conditions.
		6	Toxic Agent Training with Off-Post Waste Disposal (MTO 6).	This training method is identical to the RCP Alternative, although it would include Off-Post disposal of wastes versus the treatment of wastes On-Site.	Viable, this alternative is able to provide the required level of training.
	6.4 NBC, Survival Recovery (Training Goal 6.4)				
		Goal			
			To ensure that personnel understand the procedures that will enhance and expedite survival recovery following an incident involving NBC weapons.		
		Training Activity			
			This training activity includes instruction in survival recovery. Related to the goal is training on required communications skills including the requirements for and procedures to notify the chain-of-command. Interpretation of meteorological data and atmospheric conditions is also included in the training in order to allow personnel to identify and track potential areas of contamination.		

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
No Action			
	No Action (Baseline Conditions at FLW).	Training in this training goal at FLW currently includes classroom and field/maneuver training on battlefield response procedures. The field/maneuver training includes the use of small quantities of colored smoke (released from smoke grenades and canisters) but does not involve the use of radiological isotopes, or chemical or biological agents. Students are instructed on the performance of these actions and in the operation and maintenance of these pieces of equipment while wearing regular uniforms and while wearing personal NBC protective equipment (as listed in item 4.3 above). Training similar to that conducted by the U.S. Air Force at the Chemical School involving Accident Response and Based Recovery is not currently accomplished at FLW .	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW .	This training alternative includes lectures in a general instruction classroom which are augmented by training aids that are brought into the classroom to help demonstrate the subject matter being discussed. Training is also augmented by the use of field/maneuver training exercises in which students are instructed on the performance of these actions while wearing regular uniforms and while wearing personal NBC protective equipment. This training can involve the use of unsealed source radiological sources in exterior training areas.	Viable, this alternative is able to provide the required level of training.
1	Lecture (only) (MTO 1).	This alternative will include only lecture instruction.	Non-viable, this alternative is unable to provide the required level of training.
2	Field/ maneuver training (MTO 2).	This alternative will include the use of an exterior training area.	Non-viable, this alternative is unable to provide the required level of training.
3	Simulation of Radiological Effects (MTO 3).	This alternative includes the use of a general instruction classroom to complete similar training to that discussed in the RCP Alternative above, but will provide for field/maneuver training using equipment (such as the AN/TDQ-T1(V) continuous wave radio transmitter) to simulate the effects of radiological materials.	Viable, this alternative is able to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
7. OBSCURANT PROCEDURES (Training Activity Group No. 7)			
7.1 Obscurant , Employment Principles (Training Goal 7.1)			
Goal			
	To ensure that personnel understand how to most effectively use obscurants. This training provides an introduction into the types of obscurants available, the effectiveness of the different types of obscurants to block different detection systems, the effects of various meteorological conditions on obscurants and a review of available generation systems to allow the selection of the proper obscurant and dispersion methods. The military employs obscurants (smoke) principally to conceal or screen the movement of troops and vehicles. Obscurants have critical importance in neutralizing enemy sensors and hiding friendly forces and material. Smoke screens can also be used offensively for immobilizing enemy troops by clouding their vision.		
Training Activity			
	This training activity includes training in the principles, goals and goals of using obscurants.		
No Action			
	No Action (Baseline Conditions at FLW).	Training in this training goal at FLW includes classroom and field/maneuver training. Training includes classroom instruction on the use of obscurants to conceal Engineer Operations and the use of obscurants as one of the defensive measures included on the Combat Engineer Vehicle.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW.	This training alternative includes lectures in a general instruction classroom which are augmented by training aids that are brought into the classroom to help demonstrate the subject matter being discussed.	Viable, this alternative is able to provide the required level of training.
1	Lecture (only) (MTO 1).	This alternative will include only lecture instruction.	Non-viable, this alternative is unable to provide the required level of training.
2	Field/ maneuver training (MTO 2).	This alternative will include the use of an exterior training areas, without the benefit of classroom training.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1: Training Goals Associated with Training Plans of Instruction			
Training Goal	**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
7.2 Obscurant, Employment (Basic Generator Operations and Static Operations) (Training Goal 7.2)			
Goal			
To ensure personnel understand the operation of the obscurant generator systems.			
Training Activity			
This training activity includes training in the basic operation of smoke generators and the use of other forms of obscurants. Introductory information includes weather, equipment positioning requirements and practicality of using smoke on the battlefield and types of smoke. Also included in this area are the operation and operator/daily pre-start maintenance of the M24A smoke generator; M56 smoke generator which is designated as the M56 generator system when mounted on a HMMWV and is designated the M58 generator system when mounted on a tracked vehicle; and the M157 smoke generator set which is designated the 1059 smoke generator system when it is mounted on a tracked vehicle and is designated the 1037 smoke generator system when mounted on a wheeled vehicle. The A/E 32U-13 is similar to the M56 but it is mounted on a trailer used primarily by the U.S. Air Force.			
Obscurant training conducted under this TG, and TGs 7.3 and 7.4 currently uses a petroleum based obscurant fog oil. Fog oils manufactured before 1986 typically had high concentrations of toxic and carcinogenic aromatics (Katz, 1980), and posed a potential health threat to exposed individuals. In 1986, military specifications for SGF-2, were altered to require the removal of carcinogens and potential carcinogens from the oil (DA, 1986a). Fog oil used at FLW will, at a minimum, comply with a newer specification (DA, 1995b) which requires manufacturers to certify the oils they produce show no evidence of carcinogenicity based on required testing. Based on scoping comments, the EIS considered the potential for the use of non-petroleum based oils (such as vegetable oils). At the present time the use of these types of oils has not been determined to be practicable. Initial investigations have indicated that it may be possible to use non-petroleum based fog oil for training. As discussed in subsection 1.4.6.5 and the Executive Summary of the EIS, the Army is reviewing the potential for the use of non-petroleum based fog oil. It is estimated that it may take 3 to 5 years for the Army to complete additional studies required to determine the effectiveness of non-petroleum oils in producing obscurant; to review potential maintenance impacts of using these oils on the obscurant equipment; the implications of using non-petroleum products during cold weather; potential implications of long-term storage of non-petroleum products; and the potential environmental impacts of using non-petroleum oils at FLW.			
No Action			
	No Action (Baseline Conditions at FLW).	Training in this training goal at FLW currently includes classroom and field/maneuver training. Training includes classroom instruction on the use of obscurants to conceal Engineer Operations and includes the use of M8 smoke grenades and smoke pots. This training is infrequent and widely dispersed across the installation. Training and operation of smoke generators and ASVs is not currently performed at FLW.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
Alternatives			
	RCP Alternative from FMC to FLW.	This alternative includes the use of a general instruction classroom to provide instruction on the goals, goals and use of obscurant on the battlefield. This training is followed by an introduction to the various types of obscurants that are available and more detailed instruction on the operation of the fog oil smoke generators. Students are then provided an opportunity to work with smoke generating equipment to learn operation and pre-start procedures. Following lecture on proper pre-start procedures at general and applied instruction classrooms, students are instructed on the proper methods of generating fog oil smoke through the use of generators in a static situation. This training requires for each student to operate each generator type (M3A4 (which will not be relocated to FLW), M56 and M157 at a range facility a minimum of 10 minutes. The starting procedures and characteristics for the M157 pulse jet generator that is cold (less than 600 degrees) and one that is hot (warmer than 600 degrees) are different, consequently students must be provided the opportunity to operate the generator under both conditions. Implementation of this alternative will result in an estimated fog oil usage of up to 20,000 gallons per year.	Viable, this alternative is able to provide the required level of training.
1	Lecture (only) (MTO 1).	This alternative includes the use of only lecture instruction, without the additional skill development offered by operation of the smoke generators or smoke grenades.	Non-viable, this alternative is unable to provide the required level of training.
2	Field training (only) (MTO 2).	This alternative includes the use of a training area (only) to perform the static smoke training mission.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			Alternative Title	Alternative Description	Viable or Non-Viable
		3	Modification using water as the fog source not fog oil (MTO 3).	This alternative includes the items discussed in the RCP Alternative above, but uses water as the fog source in lieu of fog oil. Implementation of this alternative will result in the use of up to 20,000 gallons of water per year.	Non-viable, the internal components of the M3A4 and M56 generators make this alternative impractical.
		4	Modification using vegetable oil as the fog source not fog oil (MTO 4).	This alternative includes the items discussed in the RCP Alternative above, but uses a vegetable based oil as the fog source in lieu of fog oil. Implementation of this alternative will result in the use of up to 20,000 gallons per year.	Non-viable, the internal components of the M3A4 and M157 generators make this alternative impractical, as the fog oil is part of the cooling/lubrication system.
		5	Reduced training time (MTO 5).	This alternative includes the items discussed in the RCP Alternative above, but will reduce the amount of time authorized for each student for starting each generator to five minutes for the M56 and a total of four minutes (including two minutes each for a cold start and a hot start) on the M157 generator system. Implementation of this alternative will reduce the estimated requirement for obscurant for this alternative to up to 8,500 gallons per year.	Viable, this alternative is able to provide the required level of training.
		6	Reduced training time augmented by a simulator (MTO 6).	This alternative includes the items discussed in the RCP Alternative above, but will reduce the amount of time authorized for each student for starting each generator to three minutes on the M56, and a total of two minutes on the M157 (including one minute for a cold start and one minute for a hot start). This alternative will also include the development of a computer simulator that will allow for students to practice starting and operating procedures without generating obscurant. The simulator will be designed to resemble the desired starting panels and the lights and gauges on the panel could be programmed to respond to both correct and incorrect starting procedures. Implementation of this alternative will reduce the estimated requirement for obscurant for this alternative to up to 4,000 gallons per year.	Viable, this alternative is able to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
7	Water/ Recycling Manifold (MTO 7).	This alternative will include the use of a recycling manifold on the M56 generator, the use of a water manifold on the M157 and the use of the A/E 32U-13 by the U.S. Air Force during static training. Using the water manifold will allow students allow students to use the M157 generators without concerns for the impacts of fog oil emissions from static training. Likewise use of the M56 recycling manifold will allow for training on the M56 to occur without concern for fog oil emissions. Fog oil emissions will be reduced to up to 500 gallons per year. This will allow for the full demonstration of the M56 and M157 generator systems using fog oil prior to training by students with either the water manifold of the oil recycling manifold installed. Training by the U.S. Air Force with the A/E 32U-13 system will require result in the emission of up to 500 gallons of fog oil. A manifold has not been designed that will function on the A/E 32U-13.	Viable, this alternative is able to provide the required level of training.
8	Indoor training (MTO 8).	This alternative includes the items discussed in the Relocate Current Training Practice alternative, but training will be conducted inside a building designed to capture the vapor and filter it out of the exhaust. Implementation of this alternative will result in the use of up to 20,000 gallons per year.	Non-viable, this alternative may result in a fire hazard due to the indoor use of combustible fog oil.
9	Computer simulation (MTO 9).	Under this training alternative, training will include the development and use of a computer driven simulator. The simulator will allow students to practice starting and operating procedures without generating obscurant. The simulator will be designed to resemble the desired starting panels and the lights and gauges on the panel could be programmed to respond to both correct and incorrect starting procedures. This alternative will not include the use of actual generators.	Non-viable, this alternative is unable to provide the required level of training.
7.3 Obscurant, Employment Proficiency Test (Mobile Operations) (Training Goal 7.3)			
Goal			
To expand on the level of understanding that personnel have following completion of 7.1 and 7.2. Personnel completing this training should be able to anticipate the effects of existing environmental conditions (temperature, wind direction, wind speed, air stability, etc.) to develop the most effective plan for generating and employing obscurants.			

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
Training Activity			
	This training activity includes training in the mobile smoke operations and the use of mobile smoke to obscure specific targets. Included in this training goal is the interpretation of meteorological conditions, determination of the best time and equipment positioning points to generate obscurants to cover the desired target and a review of available systems to allow selection of the proper obscurant and dispersion methods. Also included in this area are the operation and operator/daily pre-start maintenance of vehicle mounted obscurant grenade launchers that are installed on the Combat Engineer Vehicle and HMMWVs and ASVs.		
No Action			
	No Action (Baseline Conditions at FLW).	Training in this training goal is not currently conducted at FLW.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW.	This alternative includes the use of a general instruction classroom to provide additional instruction on the goals, goals and use of maneuver obscuration on the battlefield (basic instruction is conducted as part of the introduction and static smoke operations). This training is followed by refresher training on meteorological information and control parameters. Students are then tasked with obscuring a designated target and required to develop an execution plan. Equipment familiarization, operator training and a field/maneuver demonstration of capability follows the classroom training as students attempt to use obscurant equipment to conceal the designated target using fog oil based obscurant. Current training practices result in the use of up to 30,000 gallons of fog oil per year for training Active Component personnel and 11,500 gallons per year for training Reserve Component personnel.	Viable, this alternative is able to provide the required level of training.
1	Lecture (only) (MTO 1).	This alternative includes the use of only lecture instruction, without the additional skill development offered by operation of smoke generators.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
2	Field training (MTO 2).	This alternative includes the use of a training area (only) to perform the mobile smoke training functions.	Non-viable, this alternative is unable to provide the required level of training.
3	Modification using water as the fog source not fog oil (MTO 3).	This alternative includes the items discussed in the Current Training Practice alternative above, but uses water as the fog source in lieu of fog oil. Implementation of this alternative will result in the use of up to 42,000 gallons of water per year.	Non-viable, the internal components of the M3A4 and M157 generators make this alternative impractical.
4	Modification using vegetable oil as the fog source not fog oil (MTO 4).	This alternative includes the items discussed in the Current Training Practice alternative above, but uses a vegetable based oil as the fog source in lieu of fog oil. Implementation of this alternative will result in the use of up to 42,000 gallons per year.	Non-viable, the internal components of the M3A4 and M157 generators make this alternative impractical.
5	Reduced fog oil consumed (MTO 5).	This alternative includes the items discussed in the Current Training Practice alternative above, but will reduce the amount of fog oil consumed to up to 100 gallons per day. Implementation of this alternative will result in the use of up to 8,500 gallons per year.	Viable, this alternative is able to provide the required level of training.
6	Computer simulation (MTO 6).	Under this training alternative, training will include the development and use of a computer driven simulator. Use of the simulator will allow for control of lighting, sound and visual obscurant producing a variety of training scenarios, thereby resulting in a realistic training environment.	Non-viable, this alternative is unable to provide the required level of training.
7.4 Obscurant, Employment Proficiency Test (Field Training Exercises) (Training Goal 7.4)			
Goal			
To expand on the level of understanding that personnel have following completion of 7.1, 7.2 and 7.3 and to expand the training to include a more realistic military operational environment. Field Manual 3-50 and TC 3-4 state that there area four primary battlefield applications of smoke: (1) to defeat enemy reconnaissance, surveillance and target acquisition and weapons guidance systems: (2) obscuring, screening			

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal			Alternative Title	Alternative Description	Viable or Non-Viable
		Training Activity			
			This training activity includes training in the employment of static and mobile smoke operations to support concealment operations during more advanced field training exercises. Included in this training goal is the integration of meteorological conditions, determination of the best time and equipment positioning points to generate obscurants to cover the desired target and a review of available systems to allow the selection of the proper obscurant and dispersion methods.		
		No Action			
			No Action (Baseline Conditions at FLW).	Training in this training goal is not currently conducted at FLW	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
		Alternatives			
			RCP Alternative from FMC to FLW.	This alternative includes the use of a general instruction classroom to provide additional instruction on the goals, goals and use of obscurant on the battlefield (basic instruction is conducted as part of the introduction and static smoke operations). This training is followed by additional discussion on meteorological information and control parameters. As an element of a field/maneuver training exercise that lasts approximately three days and two nights students are then tasked with obscuring a designated position. The students must coordinate the ability to generate and maintain obscurant with the requirement for the battlefield commander to have specific locations obscured at specific times. Working with meteorological data and forecasts the students must develop and implement an operational plan to support the battlefield commander. Implementation of this alternative will result in the use of up to 64,000 gallons of fog oil per year for field training. This will result in the use of up to 125,000 gallons per year for all obscurant training.	Viable, this alternative is able to provide the required level of training.
		1	Reduced quantity of fog oil - 56,000 gallons (MTO 1).	This alternative includes the items discussed in the Current Training Practice alternative above, but will reduce the amount of fog oil consumed to up to 56,000 gallons per year for field training. This will result in the use of up to 84,500 gallons per year for all obscurant training.	Viable, this alternative is able to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
2	Reduced quantity of fog oil - 44,000 gallons (MTO 2).	This alternative includes the items discussed in the Current Training Practice alternative above, but will reduce the amount of fog oil consumed to up to 44,000 gallons per year for field training. This will result in the use of up to 64,500 gallons per year for all obscurant training.	Viable, this alternative is able to provide the required level of training.
3	Reduced quantity of fog oil - 28,500 gallons (MTO 3).	This alternative includes the items discussed in the Current Training Practice alternative above, but will reduce the amount of fog oil consumed to up to 28,500 gallons per year for field training. This will result in the use of up to 49,500 gallons per year for all obscurant training.	Viable, this alternative is able to provide the required level of training.
4	Lecture (only) (MTO 4).	This alternative includes the use of only lecture instruction, without the additional skill development offered by operation of smoke generators.	Non-viable, this alternative is unable to provide the required level of training.
5	Field training (MTO 5).	This alternative includes the use of a training area (only) to preform the mobile smoke training functions. Implementation of this alternative will result in the use of up to 64,000 gallons of fog oil per year for field training, with total fog oil usage for all training up to 125,000 gallons per year.	Non-viable, this alternative is unable to provide the required level of training.
6	Modification using water as the fog source not fog oil (MTO 6).	This alternative includes the items discussed in the Current Training Practice alternative above, but uses water as the fog source in lieu of fog oil. Implementation of this alternative will result in the usage of up to 64,000 gallons of water per year for field training, with total fog oil usage for all training up to 125,000 gallons per year.	Non-viable, the internal components of the current systems make this alternative impractical.
7	Modification using vegetable oil as the fog source not fog oil (MTO 7).	This alternative includes the items discussed in the Current Training Practice alternative above, but uses a vegetable based oil as the fog source in lieu of fog oil. Implementation of this alternative will result in the use of up to 64,000 gallons of vegetable oil per year for field training, with total oil usage for all training up to 125,000 gallons per year.	Non-viable, the internal components of the current systems make this alternative impractical.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
		8	Computer simulation (MTO 8).	Under this training alternative, training will include the development and use of a computer driven simulator. Use of the simulator will allow for tracking of obscurant across a programmed terrain while the impacts of wind speed, atmospheric stability, temperature and wind direction will change the shape and opacity of the obscurant. This will provide a realistic depiction of the obscurant movement without requiring the release of obscurants into the environment.	Non-viable, this alternative is unable to provide the required level of training.
	7.5 Obscurant, Generator Maintenance (Training Goal 7.5)				
		Goal			
			To ensure that personnel understand and are able to maintain generator systems that are in use by the Department of Defense.		
		Training Activity			
			This training activity includes training in the maintenance of the M24A smoke generator; M56 smoke generator which is designated as the M56 generator system when mounted on a HMMWV and is designated the M58 generator system when mounted on a tracked vehicle; the M157 smoke generator which is designated the 1059 smoke generator system when it is mounted on a tracked vehicle and is designated the 1037 smoke generator system when mounted on a wheeled vehicle; and the trailer mounted A/E 32U-13 which is used by the U.S. Air Force. Also included in this training activity are the maintenance of vehicle mounted obscurant grenade launchers that are installed on the Combat Engineer Vehicle and HMMWVs and Armored Security Vehicles (ASVs).		
		No Action			
			No Action (Baseline Conditions at FLW).	Training in this training goal at FLW is currently limited to instruction on the maintenance of the grenade launchers which are installed on Combat Engineer Vehicles. Training on the maintenance of smoke generators and the grenade launchers installed on HMMWVs and ASVs, is not currently conducted at FLW.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
		Alternatives			
			RCP Alternative from FMC to FLW.	The alternative includes the use of general instruction classrooms followed by the use of typical pieces of equipment to demonstrate proper maintenance procedures and actual hands-on equipment maintenance by students to demonstrate proficiency.	Viable, this alternative is able to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
1	Lecture (only) (MTO 1).	This alternative includes the use of only lecture instruction.	Non-viable, this alternative is unable to provide the required level of training.
2	Field training (MTO 2).	This alternative includes the use of an exterior training area (only).	Non-viable, this alternative is unable to provide the required level of training.
3	Simulated Maintenance (MTO 3).	This alternative includes the development and use of a maintenance simulator which will allow for students to perform maintenance in a controlled environment and on a specifically designed system that will replicate maintenance requirements.	Viable, this alternative is able to provide the required level of training.
4	Modified RCP Alternative (MTO 4)	This alternative includes classroom instruction followed by the use of typical pieces of equipment to demonstrate operator level maintenance procedures (but in an area that provides stormwater control). In addition, actual hands-on equipment maintenance is performed by students to demonstrate proficiency. This option varies from the RCP Alternative in that the use of vehicles for training in exterior training areas will be limited to areas that have controlled stormwater collection to prevent the inadvertent runoff of contaminated stormwater.	Viable, this alternative is able to provide the required level of training.
7.6 Obscurant, Storage Operations (Training Goal 7.6)			
Goal			
	To ensure that personnel understand the operational and environmental concerns of storing obscurants.		
Training Activity			
	This training activity includes training on the proper methods to be employed when storing, loading, unloading and transferring fog oil, the primary material used in obscurant training and operations.		

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
No Action			
	No Action (Baseline Conditions at FLW).	Training in this training goal is not currently conducted at FLW.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW .	This alternative includes the use of a general instruction classroom followed by the hands-on training in the oil storage yard where students are able to develop and demonstrate skill proficiency. This hands-on training is conducted in decentralized uncovered oil storage areas.	Viable, this alternative is able to provide the required level of training.
1	Lecture (only) (MTO 1).	This alternative includes the use of only lecture instruction.	Non-viable, this alternative is unable to provide the required level of training.
2	Oil storage yard (only) (MTO 2).	This alternative includes the use of a training area (only).	Non-viable, this alternative is unable to provide the required level of training.
3	Centralized uncovered storage facility (MTO 3).	This alternative includes the use of a general instruction classroom followed by the hands-on training in the oil storage yard where students are able to develop and demonstrate skill proficiency. This hands-on training is conducted in a centralized uncovered oil storage area.	Viable, this alternative is able to provide the required level of training.
4	Decentralized covered storage facilities (MTO 4).	This alternative includes the use of a general instruction classroom followed by the hands-on training in the oil storage yard where students are able to develop and demonstrate skill proficiency. This hands-on training is conducted in decentralized covered oil storage areas.	Viable, this alternative is able to provide the required level of training.
5	Centralized covered storage facility (MTO 5).	This alternative includes the use of a general instruction classroom followed by the hands-on training in the oil storage yard where students are able to develop and demonstrate skill proficiency. This hands-on training is conducted in a centralized covered oil storage area.	Viable, this alternative is able to provide the required level of training.

Table IV.1: Training Goals Associated with Training Plans of Instruction			
Training Goal	**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
8. RADIATION SAFETY (Training Activity Group No. 8)			
8.1 Radiation Safety (Training Goal 8.1)			
Goal			
To ensure that personnel understand and are able to apply the principles and practices of: radiation protection; radiological monitoring techniques (sufficient to measure radioactivity and evaluate real or potential hazards); radiac instrumentation (including operation, calibration and limitations); biological and health effects of radiation; exposure guidance; handling, transportation, storage, disposal and decontamination procedures; depleted uranium hazard (including storage, handling and control of low level radiological waste) and applicable Federal and Army regulations.			
Training Activity			
This training activity includes: radiation detection and identification; laboratory operations; radiation equipment operations; and radiation equipment maintenance. Students will: obtain knowledge concerning the mathematics and calculations involving the shielding of radiation; decay and the half-life concept; learn decontamination procedures *using radiological nuclides* in a controlled laboratory environment; and review principles concerning ionizing and non-ionizing radiation to include storage, handling, transportation, disposal, reporting, control and general precautions for depleted uranium, tritium, x-rays, microwaves and lasers.			
No Action			
	No Action (Baseline Conditions at FLW).	Training at FLW is currently limited to refresher training for personnel that maintain equipment at training and operational units and at General Leonard Wood Army Community Hospital and the Dental Clinics.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW.	The alternative includes the use of a general instruction classroom instruction followed by the use of equipment and radiological training aids in a specifically designed lab which meets all regulations and is licensed by the Nuclear Regulatory Commission (NRC). This training is augmented by outdoor training involving the use of small quantities of sealed radiological isotopes.	Viable, this alternative is able to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
		The small (smaller than 0.02 microcurie), sealed radiological isotope sources in exterior training areas occurs an estimated six to eight times a year. This exterior training consists of: • placing a sealed radiological sources in an exterior location, • Students must then locate, identify, contain and decontaminate the radiological isotope source and the surrounding environment.	
1	Lecture (only) (MTO 1).	This alternative includes the use of only lecture instruction.	Non-viable, this alternative is unable to provide the required level of training.
2	Lab training (MTO 2).	This alternative includes the use of a training area (only).	Non-viable, this alternative is unable to provide the required level of training.
3	General Leonard Wood Army Community Hospital (MTO 3).	This alternative includes the use of a general instruction classroom followed by the joint-use of the existing radiological lab at General Leonard Wood Army Community Hospital.	Non-viable, this alternative is unable to provide the required level of training.
4	Designed lab (MTO 4).	The alternative includes the use of a general instruction classroom instruction followed by the use of equipment and radiological training aids in a specifically designed lab which meets all regulations and is licensed by the NRC. This training will not be augmented by outdoor training.	Non-viable, this alternative is unable to provide the required level of field training as mandated by GAO, DOD and DA.
5	Computer simulation (MTO 5).	Under this training alternative, training will include the development and use of a computer driven simulator. The simulator will allow training in the anticipated environmental conditions following an NBC attack or accident.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1: Training Goals Associated with Training Plans of Instruction					
Training Goal			**Alternative Title**	**Alternative Description**	**Viable or Non-Viable**
		6	Simulated effects of Radiological Materials (MTO 6)	This alternative includes the use of a general instruction classroom instruction followed by the use of equipment and radiological training aids in a specifically designed lab which meets all regulations and is licensed by the NRC. This training will also include outdoor training involving the use of equipment designed to simulate radiological materials.	Viable, this alternative is able to provide the required level of training.
	8.2 Radiation, Test and Operational Equipment Storage (Training Goal 8.2)				
		Goal			
			To ensure that personnel understand the unique storage and maintenance requirements of equipment that contains radiological isotopes.		
		Training Activity			
			This training activity involves instruction in general precautions for the handling and storage of test and operational equipment containing depleted uranium or tritium, or emitting x-rays, microwaves or lasers.		
		No Action			
			No Action (Baseline Conditions at FLW).	Storage of radiological test and operational equipment at FLW is currently limited to training and operational units and medical equipment at General Leonard Wood Army Community Hospital and the Dental Clinics.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
		Alternatives			
			RCP Alternative from FMC to FLW.	The alternative includes the use of a central storage area for some items, with most items which are used more frequently collocated with the specific instruction area.	Viable, this alternative is able to provide the required level of proficiency.
		1	Centralized storage (MTO 1).	The alternative includes the use of a central storage area for most items with several items which are used more frequently stored closer to the instruction area.	Viable, this alternative is able to provide the required level of proficiency.
		2	Decentralized storage (MTO 2).	The alternative includes the use of multiple storage areas only.	Viable, this alternative is able to provide the required level of proficiency.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
9. RESEARCH SUPPORT (Training Activity Group No. 9)			
9.1 Research Support (Training Goal 9.1)			
Goal			
	To provide access to general and specialized library resources in order to support research carried out as a component of training.		
Training Activity			
	This training activity includes access to general library information, general historical information and historical information concerning Army and Chemical, Engineer, or Military Police Corps traditions.		
No Action			
	No Action (Baseline Conditions at FLW).	Research support at FLW currently includes the Engineer and Community Library located in Clarke Hall and a continuing education library located at the Truman Education Center. Historical information which is maintained by the FLW Historian is also located in Clark Hall.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW.	This alternative involves the relocation of individual dedicated display sites of the collections of the Military Police and Chemical Schools' libraries.	Viable, this alternative is able to provide the required level of proficiency.
1	Single location (MTO 1).	This alternative involves the identification and location of one area able to display the collections of both libraries.	Viable, this alternative is able to provide the required level of proficiency.
2	New locations (MTO 2).	This alternative involves the development of two new libraries designed to display the collections.	Viable, this alternative is able to provide the required level of proficiency.
3	Engineer School Library collection (MTO 3).	This alternative involves the display of the collections in the existing Engineer Center Library, located in Clark Hall.	Viable, this alternative is able to provide the required level of proficiency.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
9.2 Library, Specialized/Classified Information and Museum Artifacts (Training Goal 9.2)			
Goal			
To provide access to historical and specialized library resources in order to support research carried out as a component of training. Management of classified information and museum artifacts are included in this activity.			
Training Activity			
This training activity includes advanced instruction on obtaining and using historical and specialized information.			
No Action			
	No Action (Baseline Conditions at FLW).	Specialized research support at FLW currently includes the Engineer and Community Library located in Clarke Hall, the continuing education library located at the Truman Education Center and the information contained in the artifacts at the Engineer Center Museum. Classified documents are stored in safes, located in administrative areas and are made available to students as required.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW.	This alternative involves the development of a dedicated storage location within the Chemical Library for specialized and classified information and the development of two additional libraries to store and display the collections of the U.S. Army Military Police Museum and U.S. Army Chemical Museum.	Viable, this alternative is able to provide the required level of proficiency.
1	Joint location (MTO 1).	This alternative involves the development of a dedicated joint-use storage and display locations for the specialized and classified library collections and Museum artifacts.	Viable, this alternative is able to provide the required level of proficiency.
2	Existing areas (MTO 2).	This alternative involves the use of existing display and storage areas for the storage and display of specialized and classified library information and Museum artifacts.	Non-viable, attempting to force materials into the existing areas will result in unsafe storage heights and damage to items.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
3	New locations (MTO 3).	This alternative involves the development of new storage areas for the specialized research information, classified library information and Museum collections.	Viable, this alternative is able to provide the required level of proficiency.
4	Additions to Existing (MTO 4).	This alternative involves the storage and display of the artifacts at the existing Engineer Center Museum. Specialized and Classified information will be stored at Clark Hall. Additions to these buildings will be constructed to provide adequate area for the additional items.	Viable, this alternative is able to provide the required level of proficiency.
5	Multiple displays (MTO 5).	This alternative involves the display of the collections in disbursed display cases located in the educational facilities that will be used by students. Potential locations will include the library, applied instruction classrooms, general instruction classrooms, in administrative areas, in the hallways between classrooms and at the Engineer Center Museum.	Viable, this alternative is able to provide the required level of proficiency.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
10. SMALL ARMS PROCEDURES (Training Activity Group No. 10)			
10.1 Weapons Training (Training Goal 10.1)			
Goal			
	To ensure that personnel understand the operation of the weapons fired for familiarization and qualification and how to most effectively employ the weapons.		
Training Activity			
	This training activity includes instruction in weapons qualification and familiarization and Sniper and Special Weapons proficiency. Weapons qualification and familiarization includes training on the following weapons: rifles (.308 caliber); AR15 (5.56 mm) assault rifle; AT4 anti-tank weapon; Mark 19 (40 mm) grenade machine gun; M2 (0.50 caliber) machine gun; (Colt) M4 sub-machine gun; M16 (5.56 mm) rifle (which is capable of firing semi-automatic or three-round bursts through the use of a selector switch) including the use of "match grade" ammunition for the M16A2 rifle; M24 Sniper Rifle and the Remmington 700 Sniper Rifle; M60 (7.62 mm) machine guns; M203 (40 mm) grenade launcher; M240 (7.62 mm) machine guns; M249 (5.56 mm linked) squad assault weapon (SAW); M250 (40 mm) grenade launcher; M1200 (12 gauge) shotgun which will be replaced in the near future by the Benelli M1 shotgun and the Remmington 870 shotgun; MP5K (9 mm) submachine gun; Fox vehicle machine gun; Uzi machine gun; and Crew-Served Weapons (which include those weapons that require more than one person to operate).		
No Action			
	No Action (Baseline Conditions at FLW).	Training at FLW is currently limited classroom training and live-fire range qualification and familiarization. Classroom instruction includes information on range policies and safety requirements, followed by information on the proper use and maintenance of weapons. Following completion of the classroom training, students use live-fire ranges to complete weapons qualification requirements. Weapons shot for familiarization at FLW currently include: .308 Cal, .38 Cal, .50 Cal, AT4 anti -tank weapon, M16, M60 and M240 machine guns, M-203, Mark 19, 12 gauge shotgun. Weapons shot for qualification at FLW currently include: .308 Cal, .38 Cal, weapon, M-16, M-203 and 12 gauge shotgun.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal			Alternative Title	Alternative Description	Viable or Non-Viable
		Alternatives			
			RCP Alternative from FMC to FLW - includes classroom training followed by the use of live-fire ranges.	This alternative will include the use a general instruction classroom training to introduce students to the principles involved in the training goals, common safety procedures, usage of the weapon and activities which will occur on the range. This training is followed by the use of Fire Arms Training simulators (on the Mark 19) prior to live-fire range training. This procedure will introduce the use of Fire Arms Training simulators and will expand the number of weapons that are shot for both familiarization and qualification at FLW. These weapons will include: .50 Cal, M60, M240 machine gun, M250 grenade launcher and Mark 19.	Viable, this alternative is able to provide the required level of proficiency.
		1	Lecture (only) (MTO 1).	This alternative includes the use of only lecture instruction, without training on the simulators or at the live-fire training ranges.	Non-viable, this alternative is unable to provide the required level of training.
		2	Firing range (MTO 2).	This alternative will include the use of live-fire training ranges, without the classroom instruction prior to the use of live-fire training ranges.	Non-viable, this alternative may result in unsafe training conditions.
		3	Modified current practice, modified Mark 19 rounds (MTO 3).	This alternative will include the use of a general instruction classroom to introduce students to the principles involved in the training goal, common safety procedures, usage of the weapon and activities which will occur on the range. This training will be followed by the use of live-fire range training. Modified rounds will be used for Mark 19 training; thereby reducing the safety concerns and the required size of the safety fan.	Viable, this alternative is able to provide the required level of proficiency.
		4	No computer simulation (MTO 4).	Under this training alternative, eliminate the use of the Fire Arms Training Simulators (which are currently used to augment live-fire training range use for the Mark 19). The training will consist of classroom instruction followed by live-fire range training.	Viable, this alternative is able to provide the required level of proficiency.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
5	Modified current practice, high-explosive Mark 19 rounds (MTO 5).	This alternative will include the use of a general instruction classroom to introduce students to the principles involved in the training goal, common safety procedures, usage of the weapon and activities which will occur on the range. This training will be followed by the use of live-fire range training. This alternative will modify the current training practice alternative by using only Mark 19 high-explosive rounds for Mark 19 training; thereby eliminating the use of modified Mark 19 training rounds.	Viable, this alternative is able to provide the required level of proficiency.
6	Computer simulation (MTO 6).	Under this training alternative, training will include the development and use of a computer driven simulator. Use of the simulator will allow students to experience target acquisition and the anticipated sound and kick/recoil involved in using the weapon.	Non-viable, this alternative is unable to provide the required level of proficiency.
10.2 Weapons Training, Pistol (Training Goal 10.2)			
Goal			
	To ensure that personnel understand the operation of the pistols fired for familiarization and qualification and how to most effectively employ the weapons.		
Training Activity			
	This training activity includes instruction in the handling, firing and maintenance of the following weapons: .45 caliber and 9 mm and 9 mm combat pistols; 9 mm and 9 mm combat pistol training specific to the Marine Corps; and weapons employment (shoot/do not shoot).		
No Action			
	No Action (Baseline Conditions at FLW).	Training at FLW is currently limited classroom training and live-fire range qualification and familiarization. Classroom instruction includes information on range policies and safety requirements, followed by information on the proper use and maintenance of weapons. Following completion of the classroom training, students use live-fire ranges to complete weapons qualification requirements. Weapons shot for familiarization and qualification at FLW currently include: .45 Cal, 9 mm and Combat Pistol. Training at FLW also includes information on weapons employment, but does not include training to meet the specific requirements needed to support U.S. Marine Corps training.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
Alternatives			
	RCP Alternative from FMC to FLW.	This alternative will include the use a general instruction classroom training to introduce students to the principles involved in the training goal. This training will be followed by the use of FATS which allow students to obtain and demonstrate skills during controlled day-time or night-time scenarios that stress weapons employment in a shoot/no shoot environment. The fire arms training is then further developed by the use of an existing live-fire range.	Viable, this alternative is able to provide the required level of proficiency.
1	Lecture (only) (MTO 1).	Lecture (only) instruction.	Non-viable, this alternative is unable to provide the required level of training.
2	Firing range (only) (MTO 2).	This alternative will include the use of a live-fire training range to train students.	Non-viable, this alternative may result in unsafe training conditions.
3	Lecture and firing range (MTO 3).	This alternative includes the use of general instruction classrooms to provide training on the principles of the training goal, followed by use of a live-fire training range.	Viable, this alternative is able to provide the required level of proficiency.
4	Lecture and FATS use (MTO 4).	This training alternative will include providing general information in a classroom followed by use of FATS to allow for the testing of all personnel (individually) given a predetermined scenario as part of weapons training.	Non-viable, this alternative is unable to provide the required level of training.
10.3	**Weapons Storage (Training Goal 10.3)**		
Goal			
	To ensure that personnel understand the principles and procedures of NBC weapons storage (to allow graduates to inspect storage sites as required for treaty monitoring and verification), small arms storage and the transportation of weapons and ammunition, in order that these functions may be carried out safely and efficiently.		
Training Activity			
	This training activity includes instruction on: NBC weapons storage, small arms storage; transportation of weapons and ammunition; and treaty monitoring.		

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal			Alternative Title	Alternative Description	Viable or Non-Viable
		No Action			
			No Action (Baseline Conditions at FLW).	Instruction in this training goal at FLW includes classroom and field/maneuver components.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
		Alternatives			
			RCP Alternative from FMC to FLW.	This alternative includes the use of a general instruction classroom followed by the use of mock facilities allowing students to obtain and demonstrate skills in a controlled environment.	Viable, this alternative is able to provide the required level of proficiency.
		1	Lecture (only) (MTO 1).	This alternative includes the use of only lecture instruction.	Non-viable, this alternative is unable to provide the required level of training.
		2	Field training (MTO 2).	This alternative includes the use of a training area (only).	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
11. VEHICLE OPERATIONS (Training Activity Group No. 11)			
11.1 Vehicle Operations, Driver Qualification (Training Goal 11.1)			
Goal			
To provide drivers with a basic introduction to the operation of vehicles, including unique military vehicles. This training goal includes the operation of these vehicles in both tactical and non-tactical maneuvers.			
Training Activity			
This training activity includes instruction on convoy procedures; tracked vehicle operations; wheeled vehicle operations; HMMWV operations; Armored Security Vehicle (ASV) operations; and Light Vehicle Obscuration Smoke System (LVOSS) operations. The LVOSS is mounted on HMMWVs used by military police during battlefield operations. This instruction includes instruction on proper procedures to be used during both tactical and non-tactical operations.			
No Action			
	No Action (Baseline Conditions at FLW).	Training at FLW currently includes training on Convoy Procedures; Tracked Vehicle Operations, Wheeled/Non-Tactical Vehicle Operations and Wheeled/Tactical Operations, including instruction on the operation of HMMWVs. This training is conducted using classroom instruction followed by driving training in which students operate the vehicles in controlled areas, along the installation roadway system and along the roadway system within the adjacent U.S. Forest System lands.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW.	The alternative includes the use of a general instruction classroom instruction followed by the use of equipment on paved training areas, on installation roads and in established training areas where the student is able to demonstrate operational abilities. Included in these training areas are specifically designed obstacles that allow students to experience the tactical capabilities of the vehicles. These facilities include a water pit, a mud pit, a sand pit, logs across the roadway and boulders and rocks in the roadway.	Viable, this alternative is able to provide the required level of proficiency.
1	Lecture (only) (MTO 1).	This alternative includes the use of only lecture instruction.	Non-viable, this alternative is unable to provide the required level of training.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
2	Field training (MTO 2).	This alternative includes the use of a training area (only).	Viable, this alternative is able to provide the required level of proficiency.
3	Computer simulation (MTO 3).	Under this training alternative, training will include the development and use of a computer driven simulator. Use of the simulator will allow for the simulation of driving operations in a tactical and non-tactical environment.	Non-viable, this alternative is unable to provide the required level of training.
4	Augmented Computer simulation (MTO 3).	Under this training alternative, training will include the development and use of a computer driven simulator. Use of the simulator will allow for the simulation of driving operations in tactical and non-tactical environments. Use of the simulator will augment actual driver vehicle operation.	Viable, this alternative is able to provide the required level of training.
11.2 Evasive Driving (Training Goal 11.2)			
Goal			
To provide drivers and protective service personnel with functional training in threat recognition and avoidance and in vehicle handling necessary to perform evasive maneuvers.			
Training Activity			
This training activity includes instruction in advanced driving techniques including evasive maneuvers, using vehicles to form protective screens and escape procedures.			
No Action			
	No Action (Baseline Conditions at FLW).	Training in this training goal is not currently preformed at FLW.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW.	This alternative includes the use of a general instruction classroom followed by the use of a paved, controlled diver training area. This area is designed to provide driving practice without endangering other vehicles on the installations roadway system and includes a paved area specifically designed and constructed to facilitate training on skids and slides.	Viable, this alternative is able to provide the required level of proficiency.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
1	Lecture (only) (MTO 1).	This alternative includes the use of only lecture instruction.	Non-viable, this alternative is unable to provide the required level of training.
2	Classroom and simulators (MTO 2).	This alternative include the use of general instruction classroom training augmented by driving simulators, but does not include operation of vehicles.	Non-viable, this alternative is unable to provide the required level of training.
3	Field training (MTO 3).	This alternative includes the use of a training area (only), but does not include classroom instruction concerning the operation of the vehicles. This general information will be provided to students at the driving area.	Viable, this alternative is able to provide the required level of proficiency.
11.3 Vehicle Maintenance Training (Training Goal 11.3)			
Goal			
	The goal of this training activity is to ensure that personnel understand the proper maintenance procedures to use on the vehicles listed.		
Training Activity			
	This training activity includes maintenance instruction on tracked vehicles, wheeled/non-tactical vehicles and wheeled/tactical vehicles.		
No Action			
	No Action (Baseline Conditions at FLW).	Training in this goal at FLW includes the performance of daily operator, general support and direct support level maintenance on vehicles. Daily operator maintenance includes the checking of the vehicle prior to starting to ensure adequate fluid levels and that the vehicle appears ready to operate, including the correction of minor discrepancies in the vehicle. General support maintenance includes maintenance of the vehicle and mechanical systems including the replacement of system components.	Non-viable, this alternative does not allow for additional training associated with the relocation of personnel from FMC.
Alternatives			
	RCP Alternative from FMC to FLW.	This alternative includes the use of a general instruction classroom followed by the use of typical pieces of equipment to demonstrate proper maintenance procedures and actual hands-on equipment maintenance by students to demonstrate proficiency.	Viable, this alternative is able to provide the required level of proficiency.

Table IV.1:
Training Goals Associated with Training Plans of Instruction

Training Goal	Alternative Title	Alternative Description	Viable or Non-Viable
1	Lecture (only) (MTO 1).	This alternative includes the use of only lecture instruction.	Non-viable, this alternative is unable to provide the required level of training.
2	Maintenance bay (MTO 2).	This alternative includes the use of a maintenance bay only.	Viable, this alternative is able to provide the required level of proficiency.
3	Simulated Maintenance (MTO 3).	This alternative includes the development and use of a maintenance simulator which will allow for students to perform maintenance in a controlled environment and on a specifically designed system that will replicate field conditions.	Viable, this alternative is able to provide the required level of proficiency.
4	Modified RCP Alternative (MTO 4)	This option varies from the RCP Alternative in that the use of vehicles for training in exterior training areas will be limited to areas that have controlled stormwater collection to prevent the inadvertent runoff of contaminated stormwater.	Viable, this alternative is able to provide the required level of proficiency.

Source: Harland Bartholomew & Associates, Inc.

Table IV.1 identified 206 training method alternatives. A total of 97 of the 206 training method alternatives were determined to be viable. Additionally, a total of 28 training goals had more than one viable training method identified. Each of these viable training methods will be described in additional detail in subsection IV.6 below to.

IV.6 DESCRIPTION OF VIABLE TRAINING METHODS TO BE EVALUATED

More detailed descriptions of the 97 viable training method alternatives that survived the initial screening (in subsection IV.5 and Table IV. 1 above) are provided in Table IV.2. These descriptions are intended to assist in the selection of the Optimum Training Method (OPTM), as discussed in IV.8.3 (below) and the Environmentally Preferred Training Method (EPTM), as discussed in IV.8.4 (below), for the completion of each training goal. The detailed descriptions will discuss the anticipated relative impact the training method might have on both environmental criteria, and training and operating efficiency criteria.

Environmental Criteria:

1. **Air Quality**

    - including the quantity of air emissions, and
    - compliance requirements.

2. **Noise**

   - the potential to significantly increase noise levels above those currently generated by FLW operations, and
   - modification of existing installation noise zones.

3. **Fish & Wildlife Species and Habitat**

   - direct species impact, and
   - adverse habitat modification.

4. **Federal Threatened & Endangered Species**

   - direct or indirect impacts to Indiana bat, gray bat or bald eagle.

5. **Water Quality**

   - potential to adversely impact groundwater and surface water resources.

6. **Wetlands**

   - impacts to wetland flora and fauna, and
   - impacts to wetland water quality and quantity and/or seasonal distribution.

Training and Operating Efficiency Criteria:

1. **Construction and Operations and Maintenance Costs**

   - the cost to construct facilities associated with the training method,
   - the cost to operate the training facilities required to support the training method, and
   - the cost of expendable items used during training.

2. **Development Cost**

   - resources required for development of the training method.

3. **Safety**

   - the relative safety of the action with respect to trainers, trainees and the surrounding military and civilian community.

4. **Support Requirements**

   - equipment resources required,
   - human resources required,
   - land resources required and
   - waste disposal requirements.

5. **Training Flexibility**

   - the ability of the training method to accommodate changes in student load,
   - to accommodate changes in training standards,
   - ability to support other training goals,
   - time to implement,

- ability of the training method to be implemented in a timeframe compatible with the BRAC realignment requirements and
- if implementation of other training methods will positively or adversely affect the accomplishment of this training method.

6. Training Realism and Effectiveness

- the anticipated percentage of students that will be able to complete and sustain qualification requirements, and
- achieve performance levels significantly higher than average.

The detailed descriptions will only address the differences between the viable training methods. If the training methods are anticipated to have similar impacts on the criteria listed above, then evaluation of the training method for that particular item has been eliminated.

It should be noted that the criteria used during this secondary screening of training methods did not include consideration of the potential for impacts to archaeologic or historic resources. Cultural resource screening criteria were not used at this point in the analysis since Phase I surveys archaeological resource surveys have been completed for most of the installation training areas and the entire cantonment area; and an Installation Building Survey (FLW, 1992b), and Historic Preservation Plan (FLW, 1992c) have been prepared for FLW to identify all potentially significant historic resources. Given this information base, all BRAC-related facility siting concepts have been developed to avoid impacts on significant cultural resources. Therefore, use of this criteria as part of this initial screening process would not have helped the study team to distinguish the relative merits of the alternatives being considered. However, Section 4, Affected Environment describes the status of cultural resource studies and results; and Section 5, Environmental Consequences, of this EIS describes the results of the evaluation process as it relates to protection of cultural resources to ensure that these resources receive full consideration as part of the EIS process.

These detailed descriptions were prepared in the October 1995 thorough January 1996 timeframe. Consequently, the descriptions required development of assumptions that would allow for the analysis of relative differences between the alternatives even though other segments of the analysis were continuing. Based upon the completion of the additional studies (in support of the EIS impact analysis provided in Section 5 of Volume I of the EIS) it was determined that the assumptions used in this relative impact analysis were valid and the detailed descriptions would not be rewritten to reflect the more recently developed information. By providing the detailed descriptions in the format used by the analysis team in this secondary screening review, reviewers of the document and the decision maker are provided a better understanding of the process used by the analysis team.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			Alternative Title	Detailed Alternative Description
1. BATTLEFIELD PROCEDURES (Training Activity Group No. 1)				
	1.1 Call-For-Fire Support (Training Goal 1.1)			
		Alternatives		
			RCP Alternative from FMC to FLW.	This alternative will include: • general classroom instruction and • use of an applied instruction 35 mm projection facility.
				This alternative will collocate Military Police School and Chemical School training in the existing facility at FLW.
				This option varies from MTO 3, Computer Simulation which will also be reviewed in that it will not include expansion or replacement of the existing 35 mm slide projection training facility (which includes GUARDFIRST IIA system) to include an expanded interactive computer simulation capability.
				Given the differences between this and the other training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
				Environmental Criteria: • ***Air Quality.*** There will be less potential for short term air quality emissions associated with this alternative due to the lower level of construction required.
				• ***Noise.*** There will be less potential for short term noise impacts associated with this alternative due to the lower level of construction required.
				• ***Fish & Wildlife.*** There will be less potential for short term fish & wildlife impacts levels associated with this alternative due to the lower level of construction required.
				• ***T & E Species.*** There will be less potential for short term T & E species impacts associated with this alternative due to the lower level of construction required.
				• ***Water Quality.*** There will be less potential for short term water quality impacts associated with this alternative due to the lower level of construction required.
				• ***Wetlands.*** There will be less potential for short term wetlands impacts associated with this alternative due to the lower level of construction required.
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This training method will not require any additional construction. Consequently this alternative will have no construction costs. Operations and maintenance costs for this classroom are currently borne by FLW.
				• ***Development costs.*** The will be no additional development costs, as this classroom is already constructed and in use.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Relative safety.*** As this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced. Long-term safety will remain relatively similar as both options will consist of primarily classroom instruction.
		• ***Support requirements.*** This training method will not involve the use of computer simulation equipment (as called for in MTO 3) in addition to the equipment currently used. Therefore this method will not require the addition of trained staff to program and manage the use of the equipment.
		• ***Training flexibility.*** It will be more difficult for students requiring remedial or advanced training to work through additional exercises without instructor support.
		• ***Training realism, effectiveness.*** The current system is limited in its control of lighting, sound and visual conditions. This will result in a less realistic training environment than could be achieved with a simulator.
3	Computer simulation (MTO 3)	This alternative will include: • general classroom instruction and • the use of an applied instruction 35 mm projection facility which also has the capability for using a computer driven simulator.
		The computer simulator will augment the training effectiveness of the RCP Alternative, until a simulator is available students will continue to train using the existing 35 mm slide projection capacities. Additionally an applied instruction classroom will be developed to expand or replace the existing facility at FLW. This new or expanded training facility will be used for training Military Police School, Chemical School and FLW personnel.
		Given the differences between this and the other training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
		Environmental Criteria: • ***Air Quality.*** There will be a greater potential for short-term air quality emissions associated with this alternative due to the greater amount of construction required.
		• ***Noise.*** There will be a greater potential for increased short-term noise levels associated with this alternative due to the greater amount of construction required.
		• ***Fish & Wildlife.*** There will be a greater potential for short-term fish & wildlife impacts associated with this alternative due to the greater amount of construction required.
		• ***T & E Species.*** There will be a greater potential for short-term T & E species impacts associated with this alternative due to the greater amount of construction required.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Water Quality.*** There will be a greater potential for short-term water quality impacts associated with this alternative due to the greater amount of construction required.
		• ***Wetlands.*** There will be a greater potential for short-term wetlands impacts associated with this alternative due to the greater amount of construction required.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Implementation of this alternative will require the construction of an additional classroom, with a cost of approximately $620,000. For the purpose of this analysis it was assumed that one applied instruction classroom of approximately 3,000 square feet will be built. Operations and maintenance costs for the applied instruction classroom housing the simulator will be approximately $5,200 per year and are based on the assumption that the new classroom will be used approximately 30 hours per week, for a total of 246 training days a year. These operations and maintenance costs include the cost of utility service and the anticipated cleaning and maintenance costs.
		• ***Development costs.*** There will be a cost of approximately $75,000 to develop the computer simulation equipment required to expand the capabilities of the existing 35 mm slide projection system.
		• ***Relative safety.*** These will be a short-term increase in safety risk, as this training method will require additional construction. Long-term safety will remain relatively similar as both options will consist of primarily classroom instruction.
		• ***Support requirements.*** This training method will involve the use of computer simulation equipment, in addition to the equipment currently used. This increased equipment will require additional trained staff to use program and manage the use of the equipment.
		• ***Training flexibility.*** The simulator will be developed to accommodate changes in training standards, with the potential to be adapted to and integrated with, other training goals. Students requiring remedial or advanced training will be able to work through additional exercises without extensive instructor support.
		• ***Training realism, effectiveness.*** The simulator will be developed to facilitate better control of lighting, sound and visual conditions than is possible through the use of the 35 mm slide projection system (that is currently available at either FLW or FMC). This will result in a more realistic training environment, providing better training effectiveness. Additionally, the use of computer simulation will allow for the replication of various operational environments allowing for more diverse training.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
1.2 Maneuver Operations (Training Goal 1.2)		
Alternatives		
	RCP Alternative from FMC to FLW.	This alternative will include the use of a general instruction classroom, followed by the use of field/maneuver areas and simulators. The use of simulators allows students to obtain and demonstrate skill during controlled battlefield scenarios in which teams of students coordinate their teams actions. The simulator allows for development of large-scale wartime scenarios that can not be easily replicated in field/maneuver training (alone). Field/maneuver training however is still required to provide training in a more realistic environment involving day and night operations, weather impacts and a degree of isolation from other activities. Although other training methods were reviewed as part of the analysis, relocation of the current training method was determined to be the only viable training alternative to provide the required level of training proficiency for this training goal.
1.3 Mines and Obstacles Designed to Prevent to Movement (Training Goal 1.3)		
Alternatives		
	RCP Alternative from FMC to FLW.	This alternative includes: • general classroom instruction, followed by • field training, including demonstration of issue mines, flame field expedient (FFE) deterrents and other obstacles designed to prevent or hinder movement.
		As part of the current training practice personnel are instructed on the placement of issue mines, FFE deterrents, barbed wire and other items designed to prevent or limit movement by opposing forces. These items will be continued under all of the viable training methods that will be considered for the accomplishment of this training goal.
		The four viable training methods that are being reviewed here vary the amount of fuel used in the construction of FFE deterrents and the location of the expedient deterrent training.
		Under the RCP Alternative approximately 900 gallons of "thickened fuel" is used in each of 41 training cycles per year. The fuel is used to demonstrate four types of expedient measures. A short description of each of these four expedient measures is provided below:
		1) Using 50 gallons of fuel in one-gallon containers. The one-gallon containers are placed on the ground and tied together with a continuous piece of detonation cord to provide for simultaneous ignition of the fuel. This training method has been estimated to be approximately 90 percent effective in burning the fuel.

Table IV.2:
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Training Goal	Alternative Title	Detailed Alternative Description
		2) Using 50 gallons in one 55-gallon drum. The single drum is partially buried with the end directed toward the area in which you are trying to limit or restrict movement. When ignited the fuel and metal from the fuel drum provide a directional flame that will restrict movement in the designated area. This training method has been estimated to be approximately 90 percent effective in burning the fuel.
		3) Using 500 gallons in ten 55-gallon drums. The drums are placed on the ground and then bermed with sand bags or earth to provide directional control of the explosion. Depending upon the placement of the drum (vertical or horizontal) and the location of sand bags the direction of the flame and metal fragments from the drum can be controlled. Ten different drums are used to allow for the demonstration of various combinations of drums, drum orientation and berming. This training method has been estimated to be approximately 90 percent effective in burning the fuel.
		4) Using 300 gallons at the expedient flame training demonstration, which consists of digging a trench and placing the fuel directly in the trench. The trench is then ignited providing a vertical wall of flames that will limit movement. Because the fuel is placed in direct contact with the soil, it is estimated that this training method is approximately 85 percent effective in burning the fuel.
		All four methods of expedient deterrents are taught in each training class and there are approximately 41 class iterations per year. Consequently this training method will use approximately 36,900 gallons per year.
		The training consists of a series of steps that the students must learn and demonstrate in order to effectively complete the training goals. Steps required to construct a Vertical Flame Deterrent with Detonating Cord include:
		Step 1: Thicken the 50 gallons of fuel with approximately 150 ounces of M4 thickener. The thickener is added a few ounces at a time and slowly stirred into the fuel. This step takes approximately 10 to 15 minutes with each student adding and stirring the mixture approximately 2 or 3 minutes.
		Step 2: Using a 6-foot length of detonating cord, tape one end under the spoon handle of an igniter (M49 trip flare or in combat M34 WP grenade).
		Step 3: "Hasty whip" (wrap and tie off) the detonating cord (seven to ten turns around the base of the device leaving 40 feet of detonating cord to be used as a line main.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Step 4: Place a wooden stake near the device and attach igniter to it.
		Step 5: Attach the igniter detonating cord to line main by using a girth hitch with an extra turn.
		Step 6: Place six or seven sandbags on top of the drum to force the explosion down and outward in all directions, keeping the entire detonation low to the ground.
		Step 7: Remove the safety pin from the igniter.
		Step 8: Attach two electrical blasting caps (that have been tested) to a firing wire using a common series circuit.
		Step 9: Attach both electrical blasting caps to the line main by making a loop in the detonating cord and attaching electric blasting caps to it. The device is ready to be fired.
		Area coverage is approximately 50 to 80 meters in diameter. Each 55-gallon deterrent requires the following: • one 55-gallon drum, • 50 gallons of fuel (gasoline), • 100 feet of detonating cord, • 2 electrical blasting caps, • 150 ounces M4 thickening compound, • one M49 trip flare (or in combat one M34 WP grenade), and • 6 to 7 sandbags.
		Students must also learn to construct horizontal deterrents with detonating cord and both horizontal and vertical deterrents with composition C4 and blocks of TNT. Each 55-gallon drum will use approximately two 1.25-pound blocks of composition C4 or two 1-pound blocks of TNT.
		Environmental Criteria: • *Air Quality.* There will be a greater potential for air quality emissions associated with this alternative (and MTO 6) due to the greater amount of fuel that is used and burnt during training. Additionally, based on the estimated quantities of fuel used, the approximate burn rates and accounting for evaporation, each of these four training events will leave fuel unburnt on the ground. Based on the quantities of fuel used in the RCP Alternative a total of 70 gallons of fuel will be left unburnt and unevaporated after each training event, which will equate to approximately 2,870 gallons left unburnt each year. These estimates are based on:
		1) Approximately four gallons of fuel will be left unburnt at the training area that uses 50 gallons of fuel in one-gallon containers.
		2) Approximately four gallons of fuel will be left unburnt at the training area that using 50 gallons in one 55-gallon drum.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		3) Approximately 39 gallons of fuel will be left unburnt at the training area that uses 500 gallons in ten 55-gallon drums.
		4) Approximately 23 gallons of fuel will be left unburnt at the expedient flame training demonstration that uses 300 gallons.
		• ***Noise.*** There will be a greater potential for noise impacts associated with this alternative (and MTO 6) due to the greater amount of fuel used.
		• ***Fish & Wildlife.*** There will be a greater potential for fish & wildlife impacts levels associated with this alternative (and MTO 6) due to the greater amount of fuel used and the greater potential for contamination from unburnt fuel. Additionally, this training method (and MTO 6) will require the clearing of approximately 10 acres for the training area versus approximately 4 acres that will be required under Modified Training Options 5 and 7. This larger area will also require a larger fire break surrounding it that must be cleared. The larger area that must be cleared will increase the potential for fish & wildlife habitat degradation.
		• ***T & E Species.*** There will be a greater potential for T & E species impacts associated with this alternative (and MTO 6) due to the greater amount of unburnt fuel that will remain following completion of training and the greater amount of area that must be cleared to provide the training area.
		• ***Water Quality.*** There will be a greater potential for water quality impacts associated with this alternative due to the greater amount of fuel used. Based on the estimated quantities of fuel used and the approximate burn rates, each of these four training events will leave fuel unburnt that could enter surface water systems or volatilize. Based on the quantities of fuel used in the RCP Alternative a total of 70 gallons of fuel will be left unburnt after each training event, which will equate to approximately 2,870 gallons left unburnt each year
		• ***Wetlands.*** There will be a greater potential for short-term and long-term wetlands impacts associated with this alternative due to the large amount of unburnt fuel that might enter wetland areas.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Implementation of this alternative will have a lower initial construction cost than either Modified Training Options 5 or 7, but a higher construction cost than MTO 6. The lower construction cost with relation to Training Options 5 and 7 is based on the fact that each of those options include approximately $100,000 in construction associated with measures designed to limit the potential of environmental impacts associated with the unburnt fuel. This option will require a larger training area than will be required under Modified Training Options 6 and 7, as more fuel will be used. The costs associated with this additional clearing are approximately $36,000 versus the $14,400 required by options 6 and 7.
		• ***Development costs.*** The will be no additional development costs associated with the implementation of this training method. Development costs associated with the development of a training film (included in Modified Training Options 5 and 7) will be avoided.
		• ***Relative safety.*** As this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced. Long-term safety issues involved with the use of a larger amount of fuel and igniter explosives will remain.
		• ***Support requirements.*** Approximately 900 gallons of fuel at an estimated cost of $.97 per gallon are required for each class, resulting in an estimated support requirement of approximately $873 per class for fuel. Based on approximately 41 classes per year the total cost for fuel will be approximately $35,793 per year.
		• ***Training flexibility.*** This training method provides little to no flexibility in instruction. The safety requirements associated with the use of fuel and igniter explosives limit the potential for additional training should students require remedial instruction. Additionally, the explosive safety zones created by the quantities of igniter explosives and fuel limit the amount of flexibility available for the placement of this training on the installation.
		• ***Training realism, effectiveness.*** The current method of training provides a high degree of realism, with near full-scale demonstration.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
5	Reduced charge FFE deterrents and inert mines and obstacles (MTO 5)	This alternative will include: • general instruction classroom instruction, • field training with reduced charge FFE deterrents, ammunition and explosives, augmented with • professionally developed video tapes of explosions. It is estimated that this alternative will reduce the "thickened fuel" requirement to approximately 550 gallons:
		1) 50 gallons of fuel in one-gallon containers (unchanged from the RCP Alternative),
		2) 50 gallons in one 55-gallon drum (unchanged from the RCP Alternative),
		3) 250 gallons in five 55-gallon drums (reduced from 500 gallons in the RCP Alternative), and
		4) 200 gallons for the expedient wall-of-flame training (reduced from 300 gallons in the RCP Alternative).
		These estimated fuel requirements are for each training class, with approximately 41 times per year, thereby resulting in an annual requirement for approximately 22,550 gallons of fuel. Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: • ***Air Quality.*** There will be a reduced air quality emissions associated with this alternative (and MTO 7) due to the reduced amount of fuel that is used and burnt during training. Additionally, based on the estimated quantities of fuel used and the approximate burn rates, each of these four training events will leave fuel unburnt on the ground. Based on the quantities of fuel used in the RCP Alternative a total of 45 gallons of fuel will be left unburnt after each training event, which will equate to approximately 1,845 gallons left unburnt each year. These estimates are based on:
		1) Approximately four gallons of fuel will be left unburnt at the training area that uses 50 gallons of fuel in one-gallon containers.
		2) Approximately four gallons of fuel will be left unburnt at the training area that uses 50 gallons in one 55-gallon drum.
		3) Approximately 20 gallons of fuel will be left unburnt at the training area that uses 250 gallons in five 55-gallon drums.
		4) Approximately 16 gallons of fuel will be left unburnt at the expedient flame training demonstration.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Noise.*** There will be reduced potential for noise impacts associated with this alternative (and MTO 7) due to the reduced amount of fuel used.
		• ***Fish & Wildlife.*** There will be reduced potential for fish & wildlife impacts levels associated with this alternative (and MTO 7) due to the reduced amount of fuel used and the reduced potential for contamination from unburnt fuel. Additionally, this training method (and MTO 7) will require the clearing of approximately 4 acres for the training area versus approximately 10 acres that will be required under RCP Alternative or MTO 6. This smaller training area will also require a smaller fire break surrounding it. The smaller area that must be cleared will decrease the potential for fish & wildlife habitat degradation.
		• ***T & E Species.*** There will be a reduced potential for T & E species impacts associated with this alternative (and MTO 7) due to the reduced amount of unburnt fuel that will remain following completion of training and the reduced amount of area that must be cleared to provide the training area and fire break.
		• ***Water Quality***. There will be a reduced potential for water quality impacts associated with this alternative due to the reduced amount of fuel used. Based on the estimated quantities of fuel used and the approximate burn rates, each of these four training events will leave fuel unburnt that may either enter surface water systems or volatilize. Based on the quantities of fuel used in this training method a total of approximately 45 gallons (versus 70 gallons in the RCP Alternative) will be left unburnt after each training event, which will equate to approximately 1,845 gallons per year (versus 2,870 gallons per year for the RCP Alternative) left unburnt each year.
		• ***Wetlands.*** There will be a reduced potential for short-term and long-term wetlands impacts associated with this alternative due to the reduced amount of unburnt fuel that might enter wetland areas and the reduced amount of area that will be cleared.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Implementation of this alternative will have the lowest initial construction cost of the viable training methods. This option will not include construction of a runoff collection system with an estimated cost of approximately $100,000. Additionally this option will require clearing of approximately 4 acres versus 10 acres for the RCP Alternative and MTO 6. This reduced level of clearing will avoid construction costs approximately $21,600.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal			Alternative Title	Detailed Alternative Description
				• ***Development costs.*** This option will include the development and use of video tape to illustrate several of the explosions. These tapes will allow for realistic views of the explosions, but also allow for the slow motion analysis of the ignition, drum (metal) fragmentation and fire following ignition. Use of video tape will also allow for the analysis of the impacts of these devices in more detail then is possible through real explosions. Development costs associated with the development of a training film have been estimated to be approximately $50,000.
				• ***Relative safety.*** As this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced. Long-term relative safety will also be improved as a smaller amount of fuel and igniter explosives will be required.
				• ***Support requirements.*** Approximately 550 gallons of fuel (versus 900 gallons under the RCP Alternative) at an estimated cost of $.97 per gallon are required for each class, resulting in an estimated support requirement of approximately $533 per class for fuel. Based on approximately 41 classes per year the total cost for fuel will be approximately $21,853 per year.
				• ***Training flexibility.*** This training method provides much greater flexibility in instruction than the RCP Alternative or MTO 6. The safety requirements associated with the use of fuel and igniter explosives limit the potential for additional training should students require remedial instruction, however the training includes the use of video tapes which can be reviewed with the assistance of instructors to assist students that need (or desire) additional detail. Additionally, the explosive safety zones created by the quantities of fuel will be smaller, allowing a slight degree of additional flexibility in the placement of this training on the installation. The safety zones created by the igniter explosives will still provide restrictions on the location of the training.
				• ***Training realism, effectiveness.*** This method of training provides a high degree of realism, but with less than full-scale demonstration. The use of video will allow for review of explosions in slow motion and from various angles, improving comprehension of the explosive action.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
6	Live FFE deterrents and mines in a controlled area (MTO 6).	This is a modified version of RCP Alternative discussed above. This alternative involves: • classroom instruction and • demonstrations of students' skills in the field which will require approximately 900 gallons of fuel in each training class and approximately 36,900 gallons per year. This alternative differs from the RCP Alternative in that expedient wall-of-flame training is conducted in an area constructed with modifications designed to collect stormwater runoff. These modifications will consist of measures such as reinforced and lined trenches to contain and collect the fuel residue.
		These modifications will reduce the potential for impact on the following environmental resources (based on the amount of unburnt fuel runoff): • water quality and • wetlands Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: As stated above this alternative will have similar impacts as the RCP Alternative on the following environmental resources: • ***Air Quality***. • ***Noise***. • ***Fish & Wildlife***. • ***T & E Species***.
		Design and construction features included in this alternative are anticipated to reduce the impact of this training option (when compared against the RCP Alternative) with respect to the following environmental resources:

Table IV.2:
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Training Goal	Alternative Title	Detailed Alternative Description
		• ***Water Quality***. There will be a reduced potential for water quality impacts associated with this alternative than for the RCP Alternative, due to the construction of fuel collection provisions in the construction of the training area. For the purposes of this analysis it is estimated that 95 percent of the unburnt fuel at the wall of flame training area will be collected. This will reduce the quantity of unburnt fuel remaining in the environment from approximately 70 gallons of fuel per training class in the RCP Alternative to approximately 48 gallons per training event under this training method. Given a total of 48 gallons of unburnt fuel in the training area after each training class, the total fuel left in the area will be reduced from approximately 2,870 gallons per year to approximately 1,968 gallons per year. The estimate of unburnt fuel is based on:
		1) Approximately four gallon of fuel will be left unburnt at the training area that uses 50 gallons of fuel in one-gallon containers.
		2) Approximately four gallon of fuel will be left unburnt at the training area that using 50 gallons in one 55-gallon drum.
		3) Approximately 39 gallons of fuel will be left unburnt at the training area that uses 500 gallons in ten 55-gallon drums.
		4) Approximately 23 gallons of fuel will be left unburnt at the expedient flame training demonstration, of which approximately 22 gallons will be contained by the collection system. Therefore only one gallon will be left after the training event.
		• ***Wetlands.*** There will be a reduced potential for short-term and long-term wetlands impacts associated with this alternative due to the large amount of unburnt fuel that might enter wetland areas.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Implementation of this Alternative will have the highest initial construction cost of all of the viable training alternatives. This training will include approximately $100,000 in construction associated with measures designed to limit the potential of environmental impacts associated with the unburnt fuel and this option will require clearing of approximately 10 acres as specified in the RCP Alternative. The costs associated with this additional clearing are approximately $36,000 versus the $14,400 required by options 6 and 7.
		• ***Development costs.*** There will be no additional development costs associated with the implementation of this training method. Development costs associated with the development of a training film (included in Modified Training Options 5 and 7) will be avoided.

Table IV.2:
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Training Goal	Alternative Title	Detailed Alternative Description
		• ***Relative safety.*** The short-term potential for safety concerns during construction will be the greatest under this alternatives, as the amount of construction required will be largest. Long-term safety issues involved with the use of a larger amount of fuel and igniter explosives will remain.
		• ***Support requirements.*** Approximately 900 gallons of fuel at an estimated cost of $.97 per gallon are required for each class, resulting in an estimated support requirement of approximately $873 per class for fuel. Based on approximately 41 classes per year the total cost for fuel will be approximately $35,793 per year.
		• ***Training flexibility.*** This training method provides little to no flexibility in instruction. The safety requirements associated with the use of fuel and igniter explosives limit the potential for additional training should students require remedial instruction. Additionally, the explosive safety zones created by the quantities of igniter explosives and fuel limit the amount of flexibility available for the placement of this training on the installation.
		• ***Training realism, effectiveness.*** The current method of training provides a high degree of realism, with near full-scale demonstration.
7	Inert and reduced charge FFE deterrents and mines in a controlled area (MTO 7).	This is a modified version of training discussed in MTO 5 above. This alternative involves: • general classroom instruction, and • field skill demonstrations with inert and reduced charge FFE deterrents and mines, augmented with • professionally developed video tapes of explosions.
		The difference between this alternative and MTO 5 is that this training method includes the design and construction of protective modifications to the expedient wall-of-flame training area to reduce the potential for unburnt fuel from entering the surface or ground water systems.
		It is estimated that this alternative will reduce the "thickened fuel" requirement by approximately 40 percent, to approximately 550 gallons:
		1) 50 gallons of fuel in one-gallon containers (unchanged from the RCP Alternative),
		2) 50 gallons in one 55-gallon drum (unchanged from the RCP Alternative),
		3) 250 gallons in five 55-gallon drums (reduced from 500 gallons in the RCP Alternative), and
		4) 200 gallons for the expedient wall-of-flame training (reduced from 300 gallons in the RCP Alternative).

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Training Goal	Alternative Title	Detailed Alternative Description
		These estimated fuel requirements are for each training class, with approximately 41 times per year, thereby resulting in an annual requirement for approximately 22,550 gallons of fuel. Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: As stated above this alternative will have similar impacts as Modified Training Option (MTO) 5 on the following environmental resources: • ***Air Quality.*** • ***Noise.*** • ***Fish & Wildlife.*** • ***T & E Species.*** Design and construction features included in this alternative are anticipated to reduce the impact of this training option (when compared against the RCP Alternative) with respect to the following environmental resources:
		• ***Water Quality.*** There will be a reduced potential for water quality impacts associated with this alternative due to the reduced amount of fuel used. Based on the estimated quantities of fuel used and the approximate burn rates, each of these four training events will leave fuel unburnt that may either enter surface water systems or volatilize. Based on the quantities of fuel used in this training method a total of approximately 29 gallons (versus 70 gallons in the RCP Alternative) will be left unburnt after each training event.(this assumes that 95% of the unburnt fuel at the wall of flame will be collected). This will reduce the total quantity of unburnt fuel left in the training area that is not collected from approximately 2,870 gallons per year for the RCP Alternative to approximately 1,189 gallons per year under this training method. The amount of oil remaining in the training area for this training method is based on:
		1) Approximately four gallons of fuel will be left unburnt at the training area that uses 50 gallons of fuel in one-gallon containers.
		2) Approximately four gallons of fuel will be left unburnt at the training area that using 50 gallons in one 55-gallon drum.
		3) Approximately 20 gallons of fuel will be left unburnt at the training area that uses 250 gallons in five 55-gallon drums.
		4) Approximately 16 gallons of fuel will be left unburnt at the expedient flame training demonstration, of which approximately 15 gallons will be contained for the collection system for a net amount remaining of approximately one gallon.

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Training Goal	Alternative Title	Detailed Alternative Description
		Therefore a total of approximately 44 gallons will be left unburned per training event, with 15 of those gallons contained in a collection system.
		• ***Wetlands.*** There will be a reduced potential for short-term and long-term wetlands impacts associated with this alternative due to the reduced amount of unburnt fuel that might enter wetland areas and the reduced amount of area that will be cleared.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Implementation of this alternative will require the construction of approximately $100,000 worth of design features to collect stormwater runoff. However this training method will required clearing of approximately 4 acres versus 10 acres for the RCP Alternative and MTO 6. This reduced level of clearing will avoid construction costs of approximately $21,600.
		• ***Development costs.*** This option will include the development and use of video tape to illustrate several of the explosions. These tapes will allow for realistic views of the explosions, but also allow for the slow motion analysis of the ignition, drum (metal) fragmentation and fire following ignition. Use of video tape will also allow for the analysis of impacts of these devices in more detail then is possible through real explosions. Development costs associated with the development of a training film have been estimated to be approximately $50,000.
		• ***Relative safety.*** As this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced. Long-term relative safety will also be improved as a smaller amount of fuel and igniter explosives will be required.
		• ***Support requirements.*** Approximately 550 gallons of fuel (versus 900 gallons under the RCP Alternative) at an estimated cost of $.97 per gallon are required for each class, resulting in an estimated support requirement of approximately $533 per class for fuel. Based on approximately 41 classes per year the total cost for fuel will be approximately $21,853 per year.
		• ***Training flexibility.*** This training method provides much greater flexibility in instruction than the RCP Alternative or MTO 6. The safety requirements associated with the use of fuel and igniter explosives limit the potential for additional training should students require remedial instruction, however the training includes the use of video tapes which can be reviewed with the assistance of instructors to assist students that need (or desire) additional detail. Additionally, the explosive safety zones created by the quantities of fuel will be smaller, allowing a slight degree of additional flexibility in the placement of this training on the installation. The safety zones created by the igniter explosives will still provide restrictions on the location of the training.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Training realism, effectiveness.*** The current method of training provides a high degree of realism, but with less than full-scale demonstration. The use of video will allow for review of explosions in slow motion and from various angles, improving comprehension of the explosive action.
1.4 Nuclear, Biological and Chemical (NBC) Warning and Reporting System (Training Goal 1.4)		
Alternatives		
	RCP Alternative from FMC to FLW.	This alternative involves: • general classroom instruction, then • the use of simulators to obtain and demonstrate command, control and communications skills during a controlled battlefield scenario, augmented by • field/maneuver training exercises where students in chemical protective clothing perform required tasks for limited periods of time.
		The simulators also allow for the demonstration of weather effects on potential NBC environments and move the area of potential contamination across the battlefield. The use of these simulated scenarios also allows teams of students to coordinate their teams actions with other teams. This training reinforces for the students the types of difficulties that they might anticipate on the battlefield.
		Although other training methods were reviewed as part of the analysis, relocation of the current training method was determined to be the only viable training alternative to accomplish this training goal.
1.5 Night-Time Squad Engagement (Training Goal 1.5)		
Alternatives		
	RCP Alternative from FMC to FLW .	This alternative involves: • classroom instruction to introduce students to the principles involved, followed by • the use of the Fire Arms Training (FATS) simulators, further developed by • the use of live-fire ranges. Although other training methods were reviewed as part of the analysis, relocation of the current training method was determined to be the only viable training alternative to accomplish this training goal.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
1.6 Unarmed Self-Defense (Training Goal 1.6)		
Alternatives		
	RCP Alternative from FMC to FLW.	This alternative involves: • classroom instruction in the principles of self-defense, further developed and demonstrated by, • unarmed self-defense training in teams of two on padded mats in a gym, and • hand-to-hand combat training in exterior training areas. Although other training methods were reviewed as part of the analysis, relocation of the current training method was determined to be the only viable training alternative to accomplish this training goal.
1.7 Urban Terrain (Training Goal 1.7)		
Alternatives		
	RCP Alternative from FMC to FLW.	This alternative involves: • classroom instruction, followed by • development and demonstration of their skills at a specifically designed Military Operations in Urbanized Terrain (MOUT) facility developed to support this type of training. Although other training methods were reviewed as part of the analysis, relocation of the current training method was determined to be the only viable training alternative to accomplish this training goal.
1.8 Warfighting and Tactical Operations (Training Goal 1.8)		
Alternatives		
	RCP Alternative from FMC to FLW.	This alternative involves: • classroom instruction to introduce students to the principles involved, followed by • the use of the computer simulators to allow students to gain and demonstrate skills during controlled battlefield scenarios, augmented by • the use of live-fire ranges and maneuver areas. Although other training methods were reviewed as part of the analysis, relocation of the current training method was determined to be the only viable training alternative to accomplish this training goal.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening		
Training Goal	**Alternative Title**	**Detailed Alternative Description**
2. BIOLOGICAL AGENT DETECTION (Training Activity Group No. 2)		
2.1 Biological Integrated Detection System (BIDS) Battlefield Employment and Operation (Training Goal 2.1)		
Alternatives		
	RCP Alternative from FMC to FLW.	This alternative involves: • classroom instruction, followed by • use of a BIDS simulator and • field training. This training alternative differs from MTO 3 in that it will use a simulator. MTO 3 eliminates the need for the simulator, but increases the amount of time that students will spend in training at the field/maneuver training area.
		Both of these alternatives will involve the use of a small quantity of biological materials that simulate biological agents. These materials are used in order to train students on the use of the detection system and during the field training exercise to validate the students' proficiency in an operational environment. Simulants used in BIDS training include *Bacillus subtilus* var. niger (BG), *Kaolin Dust* (KD), Male specific (MS2) *Coliphage*, *Erwinia herbicola* and *Ovalbumin*. Using these simulants allows detection equipment to function properly. None of these simulants are a RCRA waste or DOT listed hazardous material. The materials are naturally occurring bacteria, clay and proteins. The materials, as described in Volume III, Appendix B, are used in relatively small quantities and are not known to be toxic or pathogenic.
		Simulants will be used in small liquid amounts (spiked samples) for analysis in the IDS and in the Component Laboratory; BG and KD will be dispersed into the air from Micronaire Generators which are atomizers that disperse simulant into the air at controlled rates from point sources for analysis in the BIDS.
		When BG is used in the BIDS or Component Lab, approximately 9 ml are used per day for 20 training days. This is an annual total of 180 ml. When aerosolized, approximately 1.5 kg (3.3 lbs) are used per day for 15 training days per year. This is an annual total of 22.5 kg (49.5 lbs). The challenge rate will be approximately 1 liter per minute of BG Slurry with a concentration of 4 x 10^9CFU per ml. Point sources will be generated with one or two Micronaire Generators. The projected maximum amount to be stored at any given time is 90 ml of liquid and 22.5 lbs for aerosolization.
		When KD is aerosolized in training areas to simulate a biological warfare agent attack approximately 5.5 kg (12.1 lbs) are used per day for two training days per year. This is an annual total of 11 kg (24.2 lbs). Point sources will be generated with one or two Micronaire Generators. The projected maximum amount of KD to be stored at any given time is 11 kg.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Male Specific (MS2) *Coliphage, Erwinia herbicola,* and *Ovalbumin* will be used as simulants in liquid form within the BIDS and the Component Laboratory. Approximately 9 ml are used per day for 20 training days per year for each simulant. This is an annual total of 180 ml for each separate simulant. The projected maximum amount of each simulant to be stored at any given time is 180 ml.
		Environmental Criteria: Because this training method will require more construction (for the simulator area) it will have a greater potential for short-term impacts on each of the environmental criteria. However, as the use of the simulator will reduce the amount of field training required by approximately 50 percent, the potential long-term impacts of training on each of these criteria will be reduced. • ***Air Quality.*** This training method will have a lower long-term impact on air quality as it will greatly reduce the amount of time that students will be operating BIDS equipment at the field/maneuver area. This will result in a reduced potential for air quality impacts associated with fugitive dust, vehicle emissions and an increase in the amount of BG and KD that will used in training.
		• ***Noise.*** This training method will have a lower long-term impact on noise as it will greatly reduce the amount of time that students will be operating BIDS equipment at the field/maneuver area.
		• ***Fish & Wildlife.*** This training method will have a lower long-term impact on fish & wildlife as it will greatly reduce the amount of time that students will be operating BIDS equipment at the field/maneuver area, thereby reducing the potential for habitat degradation. Additionally, because less simulant is used the potential for impact will be reduced.
		• ***T & E Species.*** This training method will have a lower long-term impact on T & E species as it will greatly reduce the amount of time that students will be operating BIDS equipment at the field/maneuver area, thereby reducing the potential for habitat degradation. Additionally, because less simulant is used the potential for impact will be reduced.
		• ***Water Quality.*** This training method will have a lower long-term impact on water quality as it will greatly reduce the amount of time that students will be operating BIDS equipment at the field/maneuver area, thereby reducing the potential for habitat degradation.
		• ***Wetlands.*** This training method will have a lower long-term impact on wetlands as it will greatly reduce the amount of time that students will be operating BIDS equipment at the field/maneuver area, thereby reducing the potential for habitat degradation.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Implementation of this alternative will require the construction of approximately 3,900 square feet of simulation classroom area. This additional construction will cost approximately $596,000 and increase operations and maintenance costs by approximately $6,700 per year.
		• ***Development costs.*** The existing simulators will be replicated at FLW, resulting in a cost of approximately $800,000.
		• ***Relative safety.*** There will be a short-term potential for increased safety risk associated with construction activities. The long-term potential for safety concerns will be greatly reduced as students will be operating the equipment less time.
		• ***Support requirements.*** This training method will involve the use of computer simulation equipment. This increased equipment will require additional trained staff to use program and manage the use of the equipment. However this support requirement will be more than off-set by the reduction in maintenance requirements on the BIDS systems which will not be operated as often under this alternative. Additionally, the Chemical School has estimated that without the simulators, this training will require 11 additional BIDS systems and 9 additional instructors (to assist at the field/maneuver area). The cost of the nine additional BIDS systems (which cost approximately $862,000 per unit) will be approximately $9.5 million. The additional equipment and personnel are required to offset the efficiency of the simulators, since the simulators allow students to obtain partial familiarity by watching others operating the equipment. The in-place systems do not have this flexibility.
		• ***Training flexibility.*** It will be easier for students requiring remedial or advanced training to work through additional exercises without instructor support, additionally the simulators can be set to indicate a wider variety of chemicals than can be used in the field requiring students to become more proficient at the use of detection equipment as well as train on a variety of scenarios at an accelerated pace.
		• ***Training realism, effectiveness.*** Training realism and effectiveness will be improved as instructors will be able to present multiple training scenarios to students in a shorter amount of time. Additionally, the training scenarios may be more easily tailored to different environmental conditions allowing for training in multiple wartime theaters.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
3	Lecture and field/maneuver area training (MTO 3).	This alternative involves: • classroom instruction, followed by • field/maneuver area training. This alternative differs from the RCP Alternative in that it will not use the existing simulator and will expand the amount of field/maneuver training to compensate for the loss of the training time in the simulators. Consequently this alternative will include the use of more simulant samples, at the field/maneuver area.
		Under this training alternative aerosolized BG and KD would remain the same as in the RCP Alternative. However, the use of BG, Male Specific (MS2)*Coliphage, Erwinia herbicola,* and *Ovalbumin* as simulants in liquid form within the BIDS would increase to approximately 72 ml per day for 27 training days per year. This is an annual total of 1,944 ml. Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: Because this training method will require less construction (the simulator area will not be built) it will have a decreased potential for short-term impacts on each of the environmental criteria. However, the training method will double the amount of field training required, to replace the training that will have been completed in the simulator. • ***Air Quality.*** This training method will have a higher long-term impact on air quality as it will greatly increase the amount of time that students will be operating BIDS equipment at the field/maneuver area. This will result in an increased potential for air quality impacts associated with fugitive dust, vehicle emissions and an increase in the amount of BG and KD that will used in training.
		• ***Noise.*** This training method will have a higher long-term impact on noise as it will increase the amount of time that students will be operating BIDS equipment at the field/maneuver area.
		• ***Fish & Wildlife.*** This training method will have a higher long-term impact on fish & wildlife as it will greatly increase the amount of time that students will be operating BIDS equipment at the field/maneuver area, thereby increasing the potential for habitat degradation. Additionally, because twice an much simulant will be used the potential for impact will be increased.
		• ***T & E Species.*** This training method will have a higher long-term impact on T & E species as it will greatly increase the amount of time and simulates that will be used at the field/maneuver area, thereby increasing the potential for habitat degradation.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Water Quality.*** This training method will have a higher long-term impact on water quality as it will greatly increase the amount of time that students will be operating BIDS equipment at the field/maneuver area, thereby reducing the potential for habitat degradation.
		• ***Wetlands.*** This training method will have a higher long-term impact on wetlands as it will greatly increase the amount of time and simulants used by students at the field/maneuver area.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Implementation of this alternative eliminate the requirement to construct approximately 3,900 square feet of additional simulation classroom area. This additional construction will have cost approximately $596,000. Additionally this additional area will allow for the avoidance of annual operations and maintenance cost of approximately $6,700 associated with the additional simulator area.
		• ***Development costs.*** Under the RCP Alternative, the existing simulators will be replicated, eliminating development costs associated with this alternative. Consequently no development costs will be avoided by eliminating the use of the simulators.
		• ***Relative safety.*** There will be a short-term reduction in potential safety risk associated with the elimination of construction activities. The long-term potential for safety concerns will be greatly increased as students will be operating the equipment twice as long.
		• ***Support requirements.*** Because this training method will eliminate the use of simulators and double the amount of time that students will be required to operate BIDS equipment, there will be a small decrease in staff required to program and manage the use of the simulation equipment. However this support requirement will be more than off-set by the increased maintenance requirements for the additional BIDS systems which will be required. The Chemical School has estimated that without the simulators, this training will require 11 additional BIDS systems and 9 additional instructors (to assist at the field/maneuver area). The cost of the nine additional BIDS systems (which cost approximately $862,000 per unit) will be approximately $9.5 million.
		• ***Training flexibility.*** This training method will provide much less training flexibility. Students requiring remedial or advanced training to work through additional exercises will not receive the benefit of the computerized simulation.
		• ***Training realism, effectiveness.*** This training method will result in degraded training, because without the use of the simulator, students will have less opportunity to become proficient with the BIDS.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
2.2 BIDS Maintenance (Training Goal 2.2)				
	Alternatives			
			RCP Alternative from FMC to FLW.	This alternative involves: • classroom instruction, followed by • use of typical pieces of equipment in the classroom to demonstrate general operator maintenance procedures on (a limited number of the internal components), • use of a BIDS to demonstrate operator maintenance on the HMMWV and trailer a parking area near the classroom, followed by • hands-on maintenance at a maintenance bay (as required) to illustrate more detailed operator maintenance procedures. Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: • ***Air Quality.*** There will be less potential for short-term air quality emissions associated with this alternative due to the lower level of construction required when compared to MTO 3.
				• ***Noise.*** There will be less potential for short-term noise impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
				• ***Fish & Wildlife.*** There will be less potential for short-term fish & wildlife impacts levels associated with this alternative due to the lower level of construction required when compared to MTO 3.
				• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
				• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
				• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This alternative will use existing, available maintenance and classroom facilities for instruction on BIDS equipment and system maintenance. Consequently no additional construction will be required to support this training goal.
				• ***Development costs.*** This training method will not require the development of new training methods or simulators.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal			Alternative Title	Detailed Alternative Description
				• ***Relative safety.*** As this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced when compared to MTO 3. Long-term safety will remain relatively similar for Modified Training Options 3 and 4, as all of these options will consist of primarily classroom instruction.
				• ***Support requirements.*** The will be no additional support costs associated with this training method.
				• ***Training flexibility.*** Without a simulator, as called for in MTO 3, it will be more difficult for students requiring remedial or advanced training to work through additional exercises without instructor support. Making this training method less flexible than MTO 3.
		2	Maintenance training (MTO 2).	This alternative involves: • use of a BIDS to demonstrate operator maintenance on the HMMWV and trailer a parking area near the classroom, followed by • hands-on maintenance at a maintenance bay (as required) to illustrate more detailed operator maintenance procedures.
				This training method omits the classroom segment and the use of typical pieces of equipment in the classroom to demonstrate general operator maintenance procedures on (a limited number of the internal components). This will increase the amount of time that is required at the maintenance bay to demonstrate maintenance on the limited number of items within the BIDS equipment package that are maintained by military personnel.
				Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: • ***Air Quality.*** There will be less potential for short-term air quality emissions associated with this alternative due to the lower level of construction required when compared to MTO 3.
				• ***Noise.*** There will be less potential for short-term noise impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
				• ***Fish & Wildlife.*** There will be less potential for short-term fish & wildlife impacts levels associated with this alternative due to the lower level of construction required when compared to MTO 3.
				• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term water quality impacts will be slightly higher for this alternative than for the Modified RCP Alternative.
		• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term wetlands deterioration for this alternative will be slightly higher for this alternative than the Modified RCP Alternative.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This alternative will use existing, available maintenance facilities for instruction on BIDS equipment and system maintenance. Consequently no additional construction will be required to support this training goal.
		• ***Development costs.*** This training method will not require the development of new training methods or simulators.
		• ***Relative safety.*** As this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced when compared to MTO 3. Long-term safety will be slightly lower for this alternative than for the RCP Alternative or Modified Training Options 3 and 4, as more of the training will be conducted in a maintenance facility.
		• ***Support requirements.*** The will be no additional support costs associated with this training method.
		• ***Training flexibility.*** Without a simulator, as called for in MTO 3, it will be more difficult for students requiring remedial or advanced training to work through additional exercises without instructor support, making this training method less flexible than MTO 3. Additionally without the general information presented in the classroom prior to training in the maintenance bay this Option will be less flexible than the RCP Alternative or MTO 4.
		• ***Training realism, effectiveness.*** The performance of maintenance on real pieces of equipment provides the highest degree of realism possible, but is limited by the amount of support required to set up equipment that needs maintenance. In a simulator an instructor will be more able to challenge students by changing the level of fluids of the readings that will be provided.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
		3	Simulated Maintenance (MTO 3).	This alternative involves: • development and use of a maintenance simulator which will allow for students to perform maintenance in a controlled environment and on a specifically designed system that will replicate maintenance requirements. Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: • ***Air Quality.*** There will be an increased potential for short-term air quality emissions associated with this alternative due to the higher level of construction required. The potential for long-term air quality emissions will be similar to the other alternatives as this training method consists primarily of classroom instruction.
				• ***Noise.*** There will be an increased potential for short-term noise impacts associated with this alternative due to the higher level of construction required. The potential for long-term noise increases will be similar to the other alternatives as this training method consists primarily of classroom instruction.
				• ***Fish & Wildlife.*** There will be an increased potential for short-term fish & wildlife impacts levels associated with this alternative due to the higher level of construction required. The potential for long-term fish & wildlife habitat deterioration or recuperation will be similar to the other alternatives as this training method consists primarily of classroom instruction.
				• ***T & E Species.*** There will be an increased potential for short-term T & E species impacts associated with this alternative due to the higher level of construction required. The potential for long-term T & E species habitat degradation or improvement will be similar to the other alternatives as this training method consists primarily of classroom instruction.
				• ***Water Quality.*** There will be an increased potential for short-term water quality impacts associated with this alternative due to the higher level of construction required.
				• ***Wetlands.*** There will be an increased potential for short-term wetlands impacts associated with this alternative due to the higher level of construction required.
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction of approximately 3,000 square feet, at a cost of approximately $489,000, will be required to accommodate the simulators. Additional operations and maintenance costs associated with this additional classroom will cost an estimated $5,500 per year.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Development costs.*** There will be a cost of approximately $250,000 to develop the maintenance simulator.
		• ***Relative safety.*** As this option will increase the amount of construction required, the short-term potential for safety concerns during construction will be increased. Long-term safety will remain relatively similar for the RCP Alternative and MTO 4, as all the options will consist of primarily classroom instruction.
		• ***Support requirements.*** The development and use of a simulator will require an increased in administrative support to ensure the simulator is programmed properly and maintained.
		• ***Training flexibility.*** With a simulator, as called for in this Option, it is easier for students requiring remedial or advanced training to work through additional exercises without instructor support, making this training method more flexible than the other training methods. However as changes are made in the equipment and new models fielded, the flexibility of training to support these changes will be reduced until a new simulator will be fielded.
		• ***Training realism, effectiveness.*** The performance of maintenance on real pieces of equipment provides the highest degree of realism possible, however the training is limited by the amount of support required to setup equipment that needs maintenance. In a simulator an instructor will be more able to challenge students by changing the level of fluids of the readings that will be provided.
4	Modified Current Practice (MTO 4).	This alternative involves: • classroom instruction, followed by • use of typical pieces of equipment in the classroom to demonstrate general operator maintenance procedures on a limited number of the internal components, • use of a BIDS to demonstrate operator maintenance on the HMMWV and trailer in an area designed to control surface water runoff, followed by • hands-on maintenance at a maintenance bay (as required) to illustrate more detailed operator maintenance procedures.
		This option varies from the RCP Alternative in that the use of vehicles for training in exterior training areas will be limited to areas that have controlled stormwater collection to prevent the inadvertent runoff of contaminated stormwater. Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: • ***Air Quality.*** There will be less potential for short-term air quality emissions associated with this alternative due to the lower level of construction required when compared to MTO 3.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Noise.*** There will be less potential for short-term noise impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***Fish & Wildlife.*** There will be less potential for short-term fish & wildlife impacts levels associated with this alternative due to the lower level of construction required when compared to MTO 3
		• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term water quality impacts will be slightly less for this alternative than for the RCP Alternative.
		• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term wetlands deterioration for this alternative will be slightly less for this alternative than the RCP Alternative.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This alternative will use existing, available maintenance and classroom facilities for instruction on BIDS equipment and system maintenance. Consequently no additional construction will be required to support this training goal.
		• ***Development costs.*** This training method will not require the development of new training methods or simulators.
		• ***Relative safety.*** As this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced when compared to MTO 3.
		• ***Support requirements.*** The will be no additional support costs associated with this training method.
		• ***Training flexibility.*** Without a simulator, as called for in MTO 3, it will be more difficult for students requiring remedial or advanced training to work through additional exercises without instructor support, making this training method less flexible than MTO 3.
		• ***Training realism, effectiveness.*** The performance of maintenance on real pieces of equipment provides the highest degree of realism possible, but is limited by the amount of support required to setup equipment that needs maintenance. In a simulator an instructor will be more able to challenge students by changing the level of fluids of the readings that will be provided.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
2.3 Long Range Biological Standoff Detection System (LR-BSDS) Battlefield Employment and Operation (Training Goal 2.3)		
Alternatives		
RCP Alternative from FMC to FLW.		This alternative involves: • classroom instruction, followed by • use of a LR-BSDS simulator during controlled scenarios, and • use of a UH-60 Blackhawk rotary wing aircraft (helicopter) mock-up to practice loading and unloading of the equipment.
		Under this training method, training will occur in the classroom and simulator. Actual field training with an operational LR-BSDS will occur at the unit's home station, not at FLW; therefore, no laser sighting will occur at FLW. Additionally as training will consist of classroom instruction on the theory behind the system and an introduction to the equipment no simulants are expected to be used during this portion of the training. Training on the detection of biological agents using the equipment will be conducted through a computerized system attached to the LR-BSDS simulator.
		Although other training methods were reviewed as part of the analysis, relocation of the current training method was determined to be the only viable training alternative to accomplish this training goal.
2.4 Long Range Biological Standoff Detection System (LR-BSDS) Maintenance (Training Goal 2.4)		
Alternatives		
RCP Alternative from FMC to FLW.		This alternative involves: • classroom instruction, followed by • use of typical pieces of equipment in the classroom to demonstrate general operator maintenance procedures on a limited number of the internal components, • use of a LR-BSDS to demonstrate operator maintenance in a training area near the classroom, followed by • hands-on maintenance at a maintenance bay (as required) to illustrate more detailed operator maintenance procedures. Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: • ***Air Quality.*** There will be less potential for short-term air quality emissions associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***Noise.*** There will be less potential for short-term noise impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***Fish & Wildlife.*** There will be less potential for short-term fish & wildlife impacts levels associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This alternative will use existing, available maintenance and classroom facilities for instruction on LR-BSDS equipment and system maintenance. Consequently no additional construction will be required to support this training goal.
		• ***Development costs.*** This training method will not require the development of new training methods or simulators.
		• ***Relative safety.*** As this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced when compared to MTO 3. Long-term safety will remain relatively similar for Modified Training Options 3 and 4, as all of these options will consist of primarily classroom instruction.
		• ***Support requirements.*** There will be no additional support costs associated with this training method.
		• ***Training flexibility.*** Without a simulator, as called for in MTO 3, it will be more difficult for students requiring remedial or advanced training to work through additional exercises without instructor support, making this training method less flexible than MTO 3.
2	Maintenance training (MTO 2).	This alternative involves: • use of a LR-BSDS to demonstrate operator maintenance in a training area near the classroom, followed by • hands-on maintenance at a maintenance bay (as required) to illustrate more detailed operator maintenance procedures.
		This training method omits the classroom segment and the use of typical pieces of equipment in the classroom to demonstrate general operator maintenance procedures on a limited number of the internal components. This will increase the amount of time that is required at the maintenance bay to demonstrate maintenance on the limited number of items within the LR-BSDS equipment package that are maintained by military personnel.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: • ***Air Quality.*** There will be less potential for short-term air quality emissions associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***Noise.*** There will be less potential for short-term noise impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***Fish & Wildlife.*** There will be less potential for short-term fish & wildlife impacts levels associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** These costs will be similar to the RCP Alternative.
		• ***Relative safety.*** The short-term potential for safety concerns during construction will be reduced when compared to MTO 3. Long-term safety will be slightly lower for this alternative than for the RCP Alternative or MTO 3, as more of the training will be conducted in a maintenance facility.
		• ***Support requirements.*** The will be no additional support costs associated with this training method.
		• ***Training flexibility.*** Without a simulator it will be more difficult for students requiring remedial or advanced training to work through additional exercises without instructor support, making this training method less flexible than MTO 3.
		• ***Training realism, effectiveness.*** The performance of maintenance on real pieces of equipment provides the highest degree of realism possible, but is limited by the amount of support required to set up equipment that needs maintenance. In a simulator an instructor will be more able to challenge students by changing the the readings that will be provided.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
3	Simulated Maintenance (MTO 3).	This alternative involves: • development and use of a maintenance simulator which will allow for students to perform maintenance in a controlled environment. Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: • ***Air Quality.*** There will be an increased potential for short-term air quality emissions associated with this alternative due to the higher level of construction required. The potential for long-term air quality emissions will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***Noise.*** There will be an increased potential for short-term noise impacts associated with this alternative due to the higher level of construction required. The potential for long-term noise increases will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***Fish & Wildlife.*** There will be an increased potential for short-term fish & wildlife impacts levels associated with this alternative due to the higher level of construction required. The potential for long-term fish & wildlife habitat deterioration or improvement will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***T & E Species.*** There will be an increased potential for short-term T & E species impacts associated with this alternative due to the higher level of construction required. The potential for long-term T & E species habitat degradation or improvement will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***Water Quality.*** There will be an increased potential for short-term water quality impacts associated with this alternative due to the higher level of construction required.
		• ***Wetlands.*** There will be an increased potential for short-term wetlands impacts associated with this alternative due to the higher level of construction required.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction of approximately 3,000 square feet, at a cost of approximately $489,000, will be required to accommodate the simulators. Additional operations and maintenance costs associated with this additional classroom will cost an estimated $5,500 per year.
		• ***Development costs.*** There will be a cost of approximately $250,000 to develop the maintenance simulator.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Relative safety.*** As this option will increase the amount of construction required, the short-term potential for safety concerns during construction will be increased. Long-term safety will remain relatively similar for the RCP Alternative.
		• ***Support requirements.*** The development and use of a simulator will require an increased in administrative support.
		• ***Training flexibility.*** With a simulator it is easier for students requiring remedial or advanced training to work through additional exercises without instructor support, making this training method more flexible than the other training methods. However as changes are made in the equipment and new models fielded, the flexibility of training to support these changes will be reduced until a new simulator will be fielded.
		• ***Training realism, effectiveness.*** The performance of maintenance on real pieces of equipment provides the highest degree of realism possible, however the training is limited by the amount of support required to setup equipment that needs maintenance. In a simulator an instructor will be more able to challenge students by changing the level of fluids of the readings that will be provided.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
3. NUCLEAR, BIOLOGICAL and CHEMICAL (NBC) RECONNAISSANCE OPERATIONS (Training Activity Group No. 3)				
	3.1 FOX Battlefield Employment and Operation (Training Goal 3.1)			
		Alternatives		
			RCP Alternative from FMC to FLW.	This alternative involves: • classroom instruction, followed by • use of the M93 FOX simulator scenarios, augmented by • field/maneuver area training.
				This training activity includes instruction on the use, employment capabilities and operation of the M93 FOX vehicle and chemical detection system, using simulated chemical agents. Simulants used in M93 FOX training include *Diethyl phthalate*, *Benzaldehyde*, *Cyclohexanone*, *Eucalyptol*, *Methyl Salicylate* (MES), *Diethyl Malonate* (DEM), *Dimethyl Phthalate*, *Ammonia*, *Acetone*, *Ethyl Phthalate*, *Isopropyl alcohol* and *Anisole*. The simulants are used in small quantities, controlled conditions, and have low toxicity levels. The chemical simulants do not biomagnify and are attenuated by the environment quickly because they are readily degraded by microbes, are volatile, photodecompose, are quickly metabolized and/or readily excreted. The majority of the simulants, even in large quantities or high doses, are not considered carcinogens. Using these simulants allows detection equipment to function properly.
				Training while in the simulators consists of allowing the fumes of the above simulants escape near the M93 FOX chemical detection equipment and then recapping the container for each chemical after the chemical has been detected using the equipment in the simulator.
				Training while in a field environment consists of using approximately one quart of diluted simulant (diluted one part simulant to ten parts water) in shallow reusable trays. A shallow pit is dug into the road surface and a reusable tray containing approximately 40 pounds of sand is placed in the pit. The diluted simulant solution is then poured into the tray of sand and the M93 FOX vehicle with it's onboard detection equipment is driven over the area. Following the completion of the training, the container filled with sand (and any remaining diluted simulant) is recovered for reuse in future training exercises. Some training is also done by allowing the fumes of simulants to escape near the FOX chemical detection equipment and then recapping the simulant container. A total of approximately 72 liters of simulants are used annually in this field training. Some training is also done by allowing the fumes of simulants to escape near the FOX chemical detection equipment and then recapping the simulant container.
				Amphibious (driver) training is also performed, but simulants are not used during this phase of training.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Given the differences between this and the other training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
		Environmental Criteria: • ***Air Quality.*** There will be a greater potential for short-term air quality emissions associated with this alternative due to the greater amount of construction required. However, this training method will have a lower long-term impact on air quality as it will greatly reduce the amount of time that students will be operating M93 FOX equipment at the field/maneuver area. This will result in a reduced potential for air quality impacts associated with fugitive dust, vehicle emissions and an increase in the amount of MES and DEM that will used in training.
		• ***Noise.*** There will be a greater potential for increased short-term noise levels associated with this alternative due to the greater amount of construction required. However, this training method will have a lower long-term impact on noise as it will greatly reduce the amount of time that students will be operating M93 FOX equipment at the field/maneuver area.
		• ***Fish & Wildlife.*** There will be a greater potential for short-term fish & wildlife impacts associated with this alternative due to the greater amount of construction required. However, this training method will have a lower long-term impact on fish & wildlife as it will greatly reduce the amount of time that students will be operating M93 FOX equipment at the field/maneuver area, thereby reducing the potential for habitat degradation. Additionally, because less simulant is used the potential for impact will be reduced.
		• ***T & E Species.*** There will be a greater potential for short-term T & E species impacts associated with this alternative due to the greater amount of construction required. However, this training method will have a lower long-term impact on T & E species as it will greatly reduce the amount of time that students will be operating M93 FOX equipment at the field/maneuver area, thereby reducing the potential for habitat degradation. Additionally, because less simulant is used the potential for impact will be reduced.
		• ***Water Quality***. There will be a greater potential for short-term water quality impacts associated with this alternative due to the greater amount of construction required. However, this training method will have a lower long-term impact on water quality as it will greatly reduce the amount of time that students will be operating M93 FOX equipment at the field/maneuver area, thereby reducing the potential for habitat degradation.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Wetlands.*** There will be a greater potential for short-term wetlands impacts associated with this alternative due to the greater amount of construction required. However, this training method will have a lower long-term impact on wetlands as it will greatly reduce the amount of time that students will be operating M93 FOX equipment at the field/maneuver area, thereby reducing the potential for habitat degradation.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Under this alternative, a M93 FOX System bay of approximately 3,000 square feet costing approximately $489,600 will be required to accommodate the simulators. Operations and maintenance costs are estimated at approximately $5,000 per year.
		• ***Development costs.*** The existing simulators will be relocated from FMC, eliminating development costs associated with this alternative.
		• ***Relative safety.*** There will be a short-term potential for increased safety risk associated with construction activities. The long-term potential for safety concerns will be greatly reduced as students will be operating the M93 FOX equipment less time.
		• ***Support requirements.*** This training method will involve the use of computer simulation equipment. This increased equipment will require additional trained staff to program and manage the use of the equipment. However this support requirement will be more than off-set by the reduction in maintenance requirements on the M93 FOX systems which will not be operated as often under this alternative. Additionally, the Chemical School has estimated that without the simulators, this training will require 10 additional M93 FOX vehicle systems and 8 additional instructors (to assist at the field/maneuver area). The cost of the 10 additional M93 FOX systems (which cost approximately $2,100,000 per unit) will be approximately $21 million.
		• ***Training flexibility.*** It will be easier for students requiring remedial or advanced training to work through additional exercises without instructor support, additionally the simulators can be set to indicate a wider variety of chemicals than can be used in the field requiring students to become more proficient at the use of detection equipment.
		• ***Training realism, effectiveness.*** Training realism and effectiveness will be improved as instructors will be able to present multiple training scenarios to students in a shorter amount of time. Additionally, the training scenarios may be more easily tailored to different environmental conditions allowing for training in multiple wartime theaters.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal			Alternative Title	Detailed Alternative Description
		3	Field/ maneuver area (MTO 3).	This alternative involves: • classroom instruction, followed by • field/maneuver area training.
				This alternative will include the use of approximately four times as much simulant in the field training as will be required under the RCP Alternative. This simulant will be used in the same concentrations and same manner as specified in the RCP Alternative; however without the training provided in the simulator it will be necessary for students to receive additional training at the field/maneuver training area.
				Given the differences between this and the other training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
				Environmental Criteria: • ***Air Quality.*** There will be a reduced potential for short-term air quality emissions associated with this alternative due to the reduced amount of construction required. However, this training method will have a higher long-term impact on air quality as it will greatly increase the amount of time that students will be operating M93 FOX equipment at the field/maneuver area. This will result in an increased potential for air quality impacts associated with fugitive dust, vehicle emissions and an increase in the amount of DEM and MES that will used in training.
				• ***Noise.*** There will be a reduced potential for increased short-term noise levels associated with this alternative due to the reduced amount of construction required. However, this training method will have a lower long-term impact on noise as it will increase the amount of time that students will be operating M93 FOX equipment at the field/maneuver area.
				• ***Fish & Wildlife.*** There will be a reduced potential for short-term fish & wildlife impacts associated with this alternative due to the greater amount of construction required. However, this training method will have a higher long-term impact on fish & wildlife as it will greatly increase the amount of time that students will be operating M93 FOX equipment at the field/maneuver area..
				• ***T & E Species.*** There will be a reduced potential for short-term T & E species impacts associated with this alternative due to the greater amount of construction required. However, this training method will have a higher long-term impact on T & E species as it will greatly increase the amount of time and simulants that will be used at the field/maneuver area.
				• ***Water Quality.*** There will be a reduced potential for short-term water quality impacts associated with this alternative due to the reduced amount of construction required. However, this training method will have a higher long-term impact on water quality as it will greatly increase the amount of time that students will be operating M93 FOX equipment at the field/maneuver area.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Wetlands.*** There will be a reduced potential for short-term wetlands impacts associated with this alternative due to the reduced amount of construction required. However, this training method will have a higher long-term impact on wetlands as it will greatly increase the amount of time and simulants used by students at the field/maneuver area.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Implementation of this alternative will eliminate the requirement for a M93 FOX System bay of approximately 3,000 square feet costing approximately $489,000. Operations and maintenance costs of approximately $5,000 per year will also be avoided.
		• ***Development costs.*** Under the RCP Alternative, the existing simulators will be relocated from FMC, eliminating development costs associated with this alternative. Consequently no development costs will be avoided by eliminating the use of the simulators.
		• ***Relative safety.*** There will be a short-term reduction in potential safety risk associated with the elimination of construction activities. The long-term potential for safety concerns will be greatly increased as students will be operating the M93 FOX equipment twice as long.
		• ***Support requirements.*** Because this training method will eliminate the use of simulators and double the amount of time that students will be required to operate M93 FOX equipment, there will be a small decrease in staff required to program and manage the use of the simulation equipment. However, this support requirement will be more than off-set by the increased maintenance requirements for the additional M93 FOX systems which will be required. The Chemical School has estimated that without the simulators, this training will require 10 additional M93 FOX systems and 8 additional instructors (to assist at the field/maneuver area). The cost of the 10 additional M93 FOX systems will be approximately $21 million.
		• ***Training flexibility.*** This training method will provide much less training flexibility. Students requiring remedial or advanced training to work through additional exercises will not be able to preform the additional training as instructors and equipment will not be available.
		• ***Training realism, effectiveness.*** This training method will result in degraded training, because without the use of the simulator, students will have less opportunity to become proficient with the M93 FOX.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			Alternative Title	Detailed Alternative Description
	3.2 M93 FOX Maintenance (Training Goal 3.2)			
		Alternatives		
			RCP Alternative from FMC to FLW.	This alternative involves: • classroom instruction, followed by • use of typical pieces of equipment in the classroom to demonstrate general operator maintenance procedures on internal system components, • use of a M93 FOX to demonstrate operator maintenance on the vehicle in a parking area near the classroom, followed by • hands-on maintenance at a maintenance bay (as required) to illustrate more detailed operator maintenance procedures.
				Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: • ***Air Quality.*** There will be less potential for short-term air quality emissions associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term air quality emissions will be similar for the RCP Alternative and Modified Training Options 3 and 4 as the training method consists primarily of classroom instruction.
				• ***Noise.*** There will be less potential for short-term noise impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term noise impacts will be similar for the RCP Alternative and Modified Training Options 3 and 4 as the training method consists primarily of classroom instruction.
				• ***Fish & Wildlife.*** There will be less potential for short-term fish & wildlife impacts levels associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term fish & wildlife habitat deterioration or recuperation will be similar for the RCP Alternative and Modified Training Options 3 and 4 as this training method consists primarily of classroom instruction.
				• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term T & E species habitat degradation or improvement will be similar for the RCP Alternative and Modified Training Options 3 and 4 as this training method consists primarily of classroom instruction.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term water quality impacts will be slightly higher for this alternative than for the Modified RCP Alternative.
		• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term wetlands deterioration for this alternative will be slightly higher for this alternative than the Modified RCP Alternative.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This alternative will use existing, available maintenance and classroom facilities for instruction on M93 FOX equipment and system maintenance. Consequently no additional construction will be required to support this training goal.
		• ***Development costs.*** This training method will not require the development of new training methods or simulators.
		• ***Relative safety.*** As this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced when compared to MTO 3. Long-term safety will remain relatively similar for Modified Training Options 3 and 4, as all of these options will consist of primarily classroom instruction.
		• ***Support requirements.*** The will be no additional support costs associated with this training method.
		• ***Training flexibility.*** Without a simulator, as called for in MTO 3, it will be more difficult for students requiring remedial or advanced training to work through additional exercises without instructor support. Making this training method less flexible than MTO 3.
		• ***Training realism, effectiveness.*** The performance of maintenance on real pieces of equipment provides the highest degree of realism possible, but is limited by the amount of support required to setup equipment that needs maintenance. In a simulator an instructor will be more able to challenge students by changing the level of fluids of the readings that will be provided.
2	Maintenance training (MTO 2).	This alternative involves: • use of a M93 FOX to demonstrate operator maintenance on vehicle, followed by • hands-on maintenance at a maintenance bay (as required) to illustrate more detailed operator maintenance procedures.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			Alternative Title	Detailed Alternative Description
				This training method omits the classroom segment and the use of typical pieces of equipment in the classroom to demonstrate general operator maintenance procedures on internal, system components. This will increase the amount of time that is required at the maintenance bay to demonstrate maintenance on the internal, system components that are maintained by military personnel.
				Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: • ***Air Quality.*** There will be less potential for short-term air quality emissions associated with this alternative due to the lower level of construction required when compared to MTO 3.
				• ***Noise.*** There will be less potential for short-term noise impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
				• ***Fish & Wildlife.*** There will be less potential for short-term fish & wildlife impacts levels associated with this alternative due to the lower level of construction required when compared to MTO 3.
				• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
				• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term water quality impacts will be slightly higher for this alternative than for the Modified RCP Alternative.
				• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term wetlands deterioration for this alternative will be slightly higher for this alternative than the Modified RCP Alternative.
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This alternative will use existing, available maintenance facilities for instruction on M93 FOX equipment and system maintenance. Consequently no additional construction will be required to support this training goal.
				• ***Development costs.*** This training method will not require the development of new training methods or simulators.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Relative safety.*** As this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced when compared to MTO 3. Long-term safety will be slightly lower for this alternative than for the RCP Alternative or Modified Training Options 3 and 4, as more of the training will be conducted in a maintenance facility.
		• ***Support requirements.*** The Chemical School estimates that elimination of the classroom training segment of this training method will result in the need for two additional M93 FOX vehicles, with an estimated procurement cost of approximately $2.1 million each.
		• ***Training flexibility.*** Without a simulator, as called for in MTO 3, it will be more difficult for students requiring remedial or advanced training to work through additional exercises without instructor support, making this training method less flexible than MTO 3. Additionally without the general information presented in the classroom prior to training in the maintenance bay this Option will be less flexible than the RCP Alternative or MTO 4.
		• ***Training realism, effectiveness.*** The performance of maintenance on real pieces of equipment provides the highest degree of realism possible, but is limited by the amount of support required to set up equipment that needs maintenance. In a simulator an instructor will be more able to challenge students by changing the level of fluids of the readings that will be provided.
3	Simulated Maintenance (MTO 3).	This alternative involves: • development and use of a maintenance simulator which will allow for students to perform maintenance in a controlled environment and on a specifically designed system that will replicate maintenance requirements. Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: • ***Air Quality.*** There will be an increased potential for short-term air quality emissions associated with this alternative due to the higher level of construction required.
		• ***Noise.*** There will be an increased potential for short-term noise impacts associated with this alternative due to the higher level of construction required.
		• ***Fish & Wildlife.*** There will be an increased potential for short-term fish & wildlife impacts levels associated with this alternative due to the higher level of construction required.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***T & E Species.*** There will be an increased potential for short-term T & E species impacts associated with this alternative due to the higher level of construction required.
		• ***Water Quality.*** There will be an increased potential for short-term water quality impacts associated with this alternative due to the higher level of construction required.
		• ***Wetlands.*** There will be an increased potential for short-term wetlands impacts associated with this alternative due to the higher level of construction required.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction of approximately 3,000 square feet, at a cost of approximately $489,000, will be required to accommodate the simulators. Additional operations and maintenance costs associated with this additional classroom will cost an estimated $5,500 per year.
		• ***Development costs.*** There will be a cost of approximately $250,000 to develop the maintenance simulator.
		• ***Relative safety.*** As this option will increase the amount of construction required, the short-term potential for safety concerns during construction will be increase. Long-term safety will remain relatively similar for the RCP Alternative and MTO 4, as all the options will consist of primarily classroom instruction.
		• ***Support requirements.*** The development and use of a simulator will require an increased in administrative support to ensure the simulator is programmed properly and maintained.
		• ***Training flexibility.*** With a simulator, as called for in this Option, it is easier for students requiring remedial or advanced training to work through additional exercises without instructor support, making this training method more flexible than the other training methods. However as changes are made in the equipment and new models fielded, the flexibility of training to support these changes will be reduced until a new simulator will be fielded.
		• ***Training realism, effectiveness.*** The performance of maintenance on real pieces of equipment provides the highest degree of realism possible, however, the training is limited by the amount of support required to set up equipment that needs maintenance. In a simulator an instructor will be more able to challenge students by changing the level of fluids of the readings that will be provided.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal			Alternative Title	Detailed Alternative Description
		4	Modified Current Practice (MTO 4).	This alternative involves: • classroom instruction, followed by • use of typical pieces of equipment in the classroom to demonstrate general operator maintenance procedures on internal system components, • use of a M93 FOX to demonstrate operator maintenance on the vehicle in an area designed to control surface water runoff, followed by • hands-on maintenance at a maintenance bay (as required) to illustrate more detailed operator maintenance procedures.
				This option varies from the RCP Alternative in that the use of vehicles for training in exterior training areas will be limited to areas that have controlled stormwater collection to prevent the inadvertent runoff of contaminated stormwater.
				Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: • ***Air Quality.*** There will be less potential for short-term air quality emissions associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term air quality emissions will be similar to the RCP Alternative and MTO 3 as this training method consists primarily of classroom instruction.
				• ***Noise.*** There will be less potential for short-term noise impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term noise increases will be similar in the RCP Alternative and MTO 3 as this training method consists primarily of classroom instruction.
				• ***Fish & Wildlife.*** There will be less potential for short-term fish & wildlife impacts levels associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term fish & wildlife habitat deterioration or recuperation will be similar to the RCP Alternative and MTO 3 as this training method consists primarily of classroom instruction.
				• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term T & E species habitat degradation or improvement will be similar to the RCP Alternative and MTO 3 as this training method consists primarily of classroom instruction.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term water quality impacts will be slightly less for this alternative than for the RCP Alternative.
		• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term wetlands deterioration for this alternative will be slightly less for this alternative than the RCP Alternative.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This alternative will use existing, available maintenance and classroom facilities for instruction on M93 FOX equipment and system maintenance. Consequently no additional construction will be required to support this training goal.
		• ***Development costs.*** This training method will not require the development of new training methods or simulators.
		• ***Relative safety.*** As this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced when compared to MTO 3. Long-term safety will remain relatively similar for the RCP Alternative and MTO 3, as all the options will consist of primarily classroom instruction.
		• ***Support requirements.*** The will be no additional support costs associated with this training method.
		• ***Training flexibility.*** Without a simulator, as called for in MTO 3, it will be more difficult for students requiring remedial or advanced training to work through additional exercises without instructor support, making this training method less flexible than MTO 3.
		• ***Training realism, effectiveness.*** The performance of maintenance on real pieces of equipment provides the highest degree of realism possible, but is limited by the amount of support required to setup equipment that needs maintenance. In a simulator an instructor will be more able to challenge students by changing the level of fluids of the readings that will be provided.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
4. GENERAL MILITARY TRAINING (Training Activity Group No. 4)		
4.1 General Military Training (Training Goal 4.1)		
Alternatives		
	RCP Alternative from FMC to FLW.	This training alternative includes: • classroom instruction, augmented by • training aids brought into the classroom to demonstrate the subject matter being discussed. Instruction in these areas is conducted in much the same manner as classes taught at civilian high schools or colleges. Individual classes may include either formal lectures, informal lectures, discussion sessions, informal working groups, or a combination of each. Although other training methods were reviewed as part of the analysis, relocation of the current training method was determined to be the only viable training alternative to accomplish this training goal.
4.2 General Military Training, Field Training (Training Goal 4.2)		
Alternatives		
	RCP Alternative from FMC to FLW.	This training alternative includes lectures in a general instruction classroom which are augmented by the development and demonstration of skill during additional field/maneuver training. Although other training methods were reviewed as part of the analysis, relocation of the current training method was determined to be the only viable training alternative to accomplish this training goal.
4.3 General Military Training, NBC Personal Protective Equipment (Training Goal 4.3)		
Alternatives		
	RCP Alternative from FMC to FLW.	This training alternative involves: • classroom instruction, followed by • practice donning, doffing and fit testing the equipment, after which • students are placed into a CS chamber (filled with CS (tear) gas) to demonstrate the effectiveness of the protective equipment. Given the differences between this and the other training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
		Environmental Criteria: • ***Air Quality.*** There will be a greater potential for short-term air quality emissions associated with this alternative due to the greater amount of construction required.
		• ***Noise.*** There will be a greater potential for increased short-term noise levels associated with this alternative due to the greater amount of construction required.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Fish & Wildlife.*** There will be a greater potential for short-term fish and wildlife impacts associated with this alternative due to the greater amount of construction required.
		• ***T & E Species.*** There will be a greater potential for short-term T & E species impacts associated with this alternative due to the greater amount of construction required.
		• ***Water Quality.*** There will be a greater potential for short-term water quality impacts associated with this alternative due to the greater amount of construction required.
		• ***Wetlands.*** There will be a greater potential for short-term wetlands impacts associated with this alternative due to the greater amount of construction required.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Classroom space consisting of approximately three 1,500-square-foot areas, at a cost of approximately $660,000, is called for in this alternative. These classrooms will be required to support NBC training approximately 20 percent of the time, reducing the net cost to approximately $132,000. Operations and maintenance costs are anticipated to be approximately $1,900 per year.
		• ***Development costs.*** There will be no development costs associated with implementation of the RCP Alternative; implementation of MTO 3 on the other hand will require development of new POIs that are directed to only exterior instruction and use of the gas (CS (tear)) chamber.
		• ***Relative safety.*** There will be a short-term potential for increased safety risk associated with construction activities. However long-term safety risks associated with exceptionally hot or cold weather will be reduced when compared to MTO 2.
		• ***Support requirements.*** These training options will have similar support requirements, consequently there will be no relative difference in the alternatives.
		• ***Training flexibility.*** The use of indoor classrooms allows for the training to be conducted with less of an impact from inclement weather and also allows for the use of films and other training aids that are note effective in an exterior classroom. Consequently the training flexibility of the method is much higher than that of MTO 2.
		• ***Training realism, effectiveness.*** Adverse effects to training may occur if the lack of a sheltered training area limits training during inclement weather.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
3	Field/ maneuver training (MTO 3).	This alternative involves: • instruction at an exterior training area, followed by • practice donning, doffing and fit testing the equipment, after which • students are placed into a CS chamber (filled with CS (Tear) gas) to demonstrate the effectiveness of the protective equipment. Given the differences between this and the other training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
		Environmental Criteria: There will be less potential for impacts to the following resources with this alternative due to the lower level of construction required. • ***Air Quality.*** • ***Noise.*** • ***Fish & Wildlife.*** • ***T & E Species.*** • ***Water Quality.*** • ***Wetlands.***
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Classroom space will not be required as part of this alternative, as will have been under the RCP Alternative. Operations and maintenance costs associated with the classrooms which will no longer be required amount to approximately $1,900 per year.
		• ***Development costs.*** Implementation of MTO 3 will require development of new POIs and teaching syllabuses that are directed to only exterior instruction and use of the Gas (CS (Tear)) Chamber.
		• ***Relative safety.*** There will be a reduced short-term potential for safety risks associated with construction activities, but long-term safety risks associated with exceptionally hot or cold weather will be magnified by this training method.
		• ***Support requirements.*** These training options will have similar support requirements, consequently there will be no relative difference in the alternatives.
		• ***Training flexibility.*** The lack of indoor classrooms make this training very susceptible to disruption from inclement weather. The RCP Alternatives will allow for the use of films and other training aids to augment lectures, but these items will have limited effectiveness under this training method. Consequently the training flexibility of the method is much lower than that of the RCP Alternative.
		• ***Training realism, effectiveness.*** Adverse effects to training may occur if the lack of a sheltered training area limits training during inclement weather.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
4.4 Signals and Other Non-Verbal Forms of Communications (Training Goal 4.4)				
	Alternatives			
			RCP Alternative from FMC to FLW.	This training alternative involves: • classroom instruction, augmented by • instructor demonstrations and • student exercises. Given the differences between this and the other training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
				Environmental Criteria: • ***Air Quality.*** There will be a greater potential for short-term air quality emissions associated with this alternative due to the greater amount of construction required.
				• ***Noise.*** There will be a greater potential for increased short-term noise levels associated with this alternative due to the greater amount of construction required.
				• ***Fish & Wildlife.*** There will be a greater potential for short-term fish & wildlife impacts associated with this alternative due to the greater amount of construction required.
				• ***T & E Species.*** There will be a greater potential for short-term T & E species impacts associated with this alternative due to the greater amount of construction required.
				• ***Water Quality.*** There will be a greater potential for short-term water quality impacts associated with this alternative due to the greater amount of construction required.
				• ***Wetlands.*** There will be a greater potential for short-term wetlands impacts associated with this alternative due to the greater amount of construction required.
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Classroom space consisting of approximately three 1,500-square-foot areas, at a cost of approximately $660,000, is called for in this alternative. These classrooms will be required to support NBC training approximately 20 percent of the time, reducing the net cost to approximately $132,000. Operations and maintenance costs are anticipated to be approximately $1,900 per year.
				• ***Development costs.*** The will be no development costs associated with implementation of the RCP Alternative; implementation of MTO 2 on the other hand will require development of new POIs that are directed to only exterior instruction.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			Alternative Title	Detailed Alternative Description
				• ***Relative safety.*** There will be a short-term potential for increased safety risk associated with construction activities. However long-term safety risks associated with exceptionally hot or cold weather will be reduced when compared to MTO 2.
				• ***Support requirements.*** These training options will have similar support requirements, consequently there will be no relative difference in the alternatives.
				• ***Training flexibility.*** The use of indoor classroom allows for the training to be conducted with less of an impact from inclement weather and also allows for the use of films and other training aids that are not effective in an exterior classroom. Consequently the training flexibility of the method is much higher than that of MTO 2.
				• ***Training realism, effectiveness.*** Adverse effects to training may occur if the lack of a sheltered training area limits training during inclement weather.
		2	Field/ maneuver training (MTO 2).	This alternative involves: • use of an exterior training area to provide general instruction, skill development and skill demonstrations. Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods:
				Environmental Criteria: There will be less potential for impacts to the following resources with this alternative due to the lower level of construction required. • ***Air Quality.*** • ***Noise.*** • ***Fish & Wildlife.*** • ***T & E Species.*** • ***Water Quality.*** • ***Wetlands.***
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** With implementation of this alternative, construction, operations and maintenance costs will be lower because training will occur outside.
				• ***Development costs.*** Implementation of this MTO will require development of new POIs that are directed to only exterior instruction.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Relative safety.*** As this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced. However long-term safety risks associated with exceptionally hot or cold weather will be increased.
		• ***Support requirements.*** The will be no additional support costs.
		• ***Training flexibility.*** The use of outdoor training areas will decrease the flexibility of training. Indoor classroom allows for the training to be conducted with less of an impact from inclement weather and also allows for the use of films and other training aids that are not effective in an exterior classroom.
		• ***Training realism, effectiveness.*** Adverse effects may occur if the lack of a sheltered training area limits training during inclement weather.
4.5 Radio Communications, including secure communications (Training Goal 4.5)		
Alternatives		
	RCP Alternative from FMC to FLW.	This training alternative involves: • classroom instruction, augmented by • use of a communications lab. The communications lab is equipped with radio equipment that is connected (via wire) to a control system. Given the differences between this and the other training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
		Environmental Criteria: • ***Air Quality.*** There will be a greater potential for short-term air quality emissions associated with this alternative due to the greater amount of construction required.
		• ***Noise.*** There will be a greater potential for increased short-term noise levels associated with this alternative due to the greater amount of construction required.
		• ***Fish & Wildlife.*** There will be a greater potential for short-term fish & wildlife impacts associated with this alternative due to the greater amount of construction required.
		• ***T & E Species.*** There will be a greater potential for short-term T & E species impacts associated with this alternative due to the greater amount of construction required.
		• ***Water Quality.*** There will be a greater potential for short-term water quality impacts associated with this alternative due to the greater amount of construction required.
		• ***Wetlands.*** There will be a greater potential for short-term wetlands impacts associated with this alternative due to the greater amount of construction required.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal			Alternative Title	Detailed Alternative Description
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Classroom space is called for in this alternative, at a cost of approximately $293,000. Additionally, this alternative requires a communications lab, at a cost of approximately $691,000. This estimate is based on one 50-person classroom and one 56-person communications lab. Operations and maintenance costs associated with these two training areas will be approximately $10,000 per year.
				• ***Development costs.*** Implementation of this training method will require the expenditure of not development costs.
				• ***Relative safety.*** This option will require additional construction and will increased the short-term potential for safety concerns during construction. However long-term safety risks associated with exceptionally hot or cold weather will be decreased.
				• ***Support requirements.*** A total of 56 individual field radios (required under MTO 2) will not be needed.
				• ***Training flexibility.*** The use of indoor training areas will increase flexibility in training. Indoor classroom allow for the training to be conducted with less of an impact from inclement weather and also allows for the use of films and other training aids that are not effective in an exterior classroom.
				• ***Training realism, effectiveness.*** Adverse effects resulting from the lack of a sheltered training area will be avoided. In addition, instructors will have more control over the training conditions.
		2	Field training (MTO 2).	This alternative involves: • outdoor instruction in an exterior training area. Students are provided with individual field radios. Given the differences between this and the other training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
				Environmental Criteria: Disposal of additional batteries that will be used by this training method will result in additional solid waste disposal requirements and could adversely impact water quality at the disposal site. However, because no construction is involved in this alternative, there will be less potential for impacts to: • ***Air Quality.*** • ***Noise.*** • ***Fish & Wildlife.*** • ***T & E Species.*** • ***Water Quality.*** • ***Wetlands.***

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Because no classroom space is called for in this alternative, construction costs and operations and maintenance costs will be avoided.
		• ***Development costs.*** Implementation of this MTO will require development of new POIs that are directed to only exterior instruction.
		• ***Relative safety.*** As this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced. However long-term safety risks associated with exceptionally hot or cold weather will be increased.
		• ***Support requirements.*** A total of 56 individual field radios will need to be purchased. Batteries for the radios will cost approximately $6,000 per year.
		• ***Training flexibility.*** The use of outdoor training areas will decrease the flexibility of training. Indoor classroom allows for the training to be conducted with less of an impact from inclement weather and also allows for the use of films and other training aids that are not effective in an exterior classroom.
		• ***Training realism, effectiveness.*** Adverse effects will occur if the lack of a sheltered training area limits training during inclement weather. In addition, instructors will have less control over the training conditions.
4.6 Computer Operations (Training Goal 4.6)		
Alternatives		
	RCP Alternative from FMC to FLW.	This training alternative involves: • classroom instruction, augmented by • use of computer labs. Personal computers at the Military Police School and Chemical School have resident software and operate independently of each other. In some cases this limits the value of training because the computer hardware is not advanced enough to facilitate effective use of the current software packages. Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: • ***Air Quality.*** There will be less potential for short-term air quality emissions associated with this alternative due to the lower level of construction required. The potential for long-term air quality emissions will be similar to the other alternatives as this training method consists primarily of classroom instruction.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Noise.*** There will be less potential for short-term noise impacts associated with this alternative due to the lower level of construction required. The potential for long-term noise increases will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***Fish & Wildlife.*** There will be less potential for short-term fish & wildlife impacts levels associated with this alternative due to the lower level of construction required. The potential for long-term fish & wildlife habitat deterioration or recuperation will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required. The potential for long-term T & E species habitat degradation or improvement will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required. The potential for long-term water quality impacts will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required. The potential for long-term wetlands deterioration or enhancement will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs***. With this alternative, two 56-person general instruction classrooms and two 56-person computer labs, at a total construction cost of approximately $1,307,000 will be required. There will be operations and maintenance costs of approximately $11,300 per year.
		• ***Development costs.*** The will be no additional development costs, since the technology for this training already exists.
		• ***Relative safety.*** There will be a short-term potential for increased safety risk associated with construction activities, however the increased risk will be slightly lower for this option due to the smaller construction requirement.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Support requirements.*** With this alternative, having a separate computer lab and classroom space will prevent lab availability from being a limiting factor. However the existing computers have a limited hard drive capacity, forcing instructors to waste time loading and unloading software and students to waste time waiting for the computers to respond.
		• ***Training flexibility.*** Training flexibility will be approximately the same for this option as it is for option 2, however MTO 3 will have the highest degree of flexibility.
		• ***Training realism, effectiveness.*** Training effectiveness will be approximately the same for this option as it is for MTO 2, however MTO 3 will have the highest degree of effectiveness.
2	Computer lab training (MTO 2).	This alternative will include: • the use of computer labs only for the instruction of students. Because the computer labs will be used when a general instruction classroom will be adequate, there will be a requirement for approximately four additional lab versus the two additional labs that will be required under the RCP Alternative. Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: • ***Air Quality.*** There will be a greater potential for short-term air quality emissions associated with this alternative due to the greater amount of construction required.
		• ***Noise.*** There will be a greater potential for increased short-term noise levels associated with this alternative due to the greater amount of construction required.
		• ***Fish & Wildlife.*** There will be a greater potential for short-term fish & wildlife impacts associated with this alternative due to the greater amount of construction required.
		• ***T & E Species.*** There will be a greater potential for short-term T & E species impacts associated with this alternative due to the greater amount of construction required.
		• ***Water Quality.*** There will be a greater potential for short-term water quality impacts associated with this alternative due to the greater amount of construction required.
		• ***Wetlands.*** There will be a greater potential for short-term wetlands impacts associated with this alternative due to the greater amount of construction required.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal			Alternative Title	Detailed Alternative Description
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** With this alternative, four 56-person computer labs with approximately 2,100 square feet each, at a total construction cost of approximately $1,735,000. There will be operations and maintenance costs of approximately $13,000 per year.
				• ***Development costs.*** The will be no additional development costs.
				• ***Relative safety.*** There will be a short-term potential for increased safety risk associated with construction activities.
				• ***Support requirements.*** With this alternative, having four separate computer labs will prevent lab availability from may being a limiting factor. However the existing computers have a limited hard drive capacity, forcing instructor to waste time loading and unloading software and students to waste time waiting for the computers to respond.
				• ***Training flexibility.*** Training flexibility will be approximately the same for this option as it is for option 2, however MTO 3 will have the highest degree of flexibility.
				• ***Training realism, effectiveness.*** Training effectiveness will be approximately the same for this option as it is for MTO 2, however MTO 3 will have the highest degree of effectiveness.
		3	Computer lab with the computers tied to a network (MTO 3).	This training alternative is very similar to the RCP alternative. It includes: • classroom instruction, augmented by • use of computer labs. In addition, this alternative will incorporate the use of a computer network with a centralized computer server. Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: Since the physical requirements for this alternative are similar to the RCP Alternative, there will be similar levels of potential for impacts to: • ***Air Quality.*** • ***Noise.*** • ***Fish & Wildlife.*** • ***T & E Species.*** • ***Water Quality.*** • ***Wetlands.***

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Training and Operating Efficiency Criteria: Since this alternative is very similar to the RCP Alternative there will be similar levels of potential for impact to: • ***Construction, operations and maintenance costs,*** • ***Development costs,*** and • ***Relative safety.*** The use of a computer network will provide the following differences between this option and the RCP Alternative:
		• ***Support requirements.*** The network server will allow for the relocation of software to a centralized location. This will allow better control of software and free up local hard-drive space to support other memory requirements. In addition, use of a central server will better take advantage of the capabilities of the existing computer hardware and provide for future introductions of new software. The new server will be acquired at a cost of approximately $25,000.
		• ***Training flexibility.*** Training flexibility will be increased as the network will expand the ability to use the existing computers.
		• ***Training realism, effectiveness.*** Training effectiveness will improved as it will eliminate time spent loading software.
		• ***Training realism, effectiveness.*** Operating training from a central server will result in more efficient and effective use of the computer hardware and reduce the operating time required to perform most applications.
4.7 Physical Fitness and Total Fitness (Training Goal 4.7)		
Alternatives		
	RCP Alternative from FMC to FLW.	This training alternative involves: • classroom instruction, augmented by • development and demonstration of physical skills through both organized and individual physical training in gyms, training areas (and pole barns) and along fitness trails and installation roadways. Although other training methods were reviewed as part of the analysis, relocation of the current training method was determined to be the only viable training alternative to accomplish this training goal.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
5. MILITARY POLICE PROCEDURES (Training Activity Group No. 5)				
	5.1 Basic Military Police Functions (Training Goal 5.1)			
		Alternatives		
			RCP Alternative from FMC to FLW .	This alternative includes the use of a general instruction classroom to provide instruction on background information and the principles to be used in Military Police operations. This training is followed by more specific training on the individual types of actions which may be required. Mock crime and investigation scenes are used to allow for development of specific skills that the individual will be required to have during actual patrol. Although other training methods were reviewed as part of the analysis, relocation of the current training method was determined to be the only viable training alternative to accomplish this training goal.
	5.2 Advanced Law Enforcement and Operations Other-than-War (Training Goal 5.2)			
		Alternatives		
			RCP Alternative from FMC to FLW.	This training alternative includes lectures in a general instruction classroom which are augmented by training aids that are brought into the classroom to help demonstrate the subject matter being discussed. Students are also trained in mock training scenes designed to resemble crime scenes. Although other training methods were reviewed as part of the analysis, relocation of the current training method was determined to be the only viable training alternative to accomplish this training goal.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
6. NUCLEAR BIOLOGICAL AND CHEMICAL (NBC) PROCEDURES (Training Activity Group No. 6)		
6.1 NBC Procedures (Training Goal 6.1)		
Alternatives		
RCP Alternative from FMC to FLW.		This alternative involves: • use of classroom instruction, followed by • more specific training on the individual types of NBC actions which may be required. The more specific training includes the use of small quantities of: • chemical agents and materials designed to simulate chemical agents in both a lab/classroom environment and at exterior training areas, and • unsealed radiological isotope sources in a lab/classroom environment and at exterior training areas designated for training by the Health Physics Officer.
		Radiological isotope use at interior and exterior training areas is in accordance with the existing Nuclear Regulatory Commission (NRC) license (at FMC). This license allows for the use of both sealed and unsealed radiological isotope sources in interior and exterior training.
		The radiation laboratories use small quantities of many isotopes. Most of these are equipment check sources or low activity laboratory sources. The most common isotopes and the highest activity used in training are the following: • approximately 250 microcurie of Americium 241, • approximately 10 millicurie of Calcium 45, • approximately 100 millicuries of Cobalt 60, • approximately 120 curies of Cesium 137, • approximately 10 millicuries of Gold 198, • approximately 1 curie of Hydrogen 3, • approximately 100 millicuries of Nickel 63, • approximately 15 microcuries of Plutonium 239, • approximately 200 millicuries of Strontium-Yttrium 90, and • approximately 25 microcuries of Uranium 233.
		The majority of radiation training takes place in the laboratories, even though the school is licensed to operate an outside alpha field and one was built at FMC. The field has never been used for training and there are no plans to use the field in the future.
		The need to use unsealed radiological isotope sources in exterior training is very limited and the effects of nuclear fallout and high radiation levels may be effectively simulated through the use of the AN/TDQ-T1(V) continuous wave radio transmitter.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Even though the use of unsealed source radiological isotopes in exterior training has not been performed at FMC, the RCP Alternative will include the ability for this training to occur within the limits of the existing NRC license at FLW, should the need arise.
		Chemical Agent Simulants include: *Diethyl phthalate, Benzaldehyde, Cyclohexanone, Eucalyptol, Methyl Salicylate* (MES), *Diethyl Malonate* (DEM), *Dimethyl Phthalate, Ammonia, Acetone, Ethyl Phthalate, Isopropyl alcohol* and *Anisole.* Additional information on these simulants is included in training goal 3.2. Additionally, this training goal will require the use of the following approximate amounts of Persistent Chemical Agent Simulants (PCAS) each year: • 1,800 liters of Soman (GD), which consists of 2% sodium carbonate, 1% polyethylene oxide, 0.4% hydroxy ethyl cellulose, 10% glycerol, 13% Diethyl malonate and 74% water; • 1,800 liters of Mustard-Lewisite (HL), which consists of 2% ferrous ammonium sulphate, 0.3% polyethylene oxide, 0.4% hydroxy ethyl cellulose, 10% glycerol, 13% methyl salicylate and 75% water; and • 1,800 pints of Chemical Agent Disclosure Solution (CADS) which consists of 0.5% 2,2 Dipyridyl, 1% phenolphthalein, 70% isopropanol and 29% water.
		Additionally, this training method will include the use of a small quantity of colored smoke released from smoke grenades and canisters.
		Given the differences between this and the other training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
		Environmental Criteria: Since small amounts of unsealed source radiological isotopes may be used in exterior environments in this alternative, there is potential for adverse impacts to: • ***Air Quality.*** • ***Fish & Wildlife.*** • ***T & E Species.*** • ***Water Quality.*** • ***Wetlands.*** This training will not involve any unique impacts to ***Noise.***
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Both of these training options will require the construction of the same support facilities, consequently no unique construction or operations and maintenance costs are anticipated with this alternative. Each of the training methods will include the use of the Radiological Lab and will require the installation to obtain a license from the NRC.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Development costs.*** No unique development costs are anticipated.
		• ***Relative safety.*** Since unsealed radiological isotope sources might be used in an exterior training environment as part of this method, greater risks due to inadvertent exposure will occur.
		• ***Support requirements.*** Since unsealed source radiological isotopes might be used in exterior environments in this alternative, support requirements will be greater due to control and handling issues.
		• ***Training flexibility.*** Since unsealed source radiological isotopes might be used in exterior environments, training flexibility will be limited.
		• ***Training realism, effectiveness***. Training realism will similar for both options.
4	Simulation of Radiological Effects (MTO 4).	This alternative is identical to the RCP Alternative except that: • it limits training with unsealed radiological isotopes to a classroom/lab environment.
		The training method will remove the ability to perform exterior training with unsealed source radiological isotopes (currently allowed in the NRC License). All exterior training associated with this training goal will use the AN/TDQ-T1(V) continuous wave radio transmitter. (Training Goal 8.1 will include the use of sealed source radiological isotopes in an exterior environment.) Consequently, the difference between the RCP Alternative and this option is a restriction of training to a greater extent than is currently called for in the existing NRC license at FMC, even though the Chemical School has not utilized unsealed source radiological isotopes in exterior training as currently authorized by the license.
		The use of chemical simulants and sealed radiological sources (as called for the RCP Alternative) will remain unchanged in this alternative method.
		Given the differences between this and the other training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
		Environmental Criteria: Since radiological isotopes are not used in exterior environments in this alternative, there is less potential from this source for impacts to: • ***Air Quality,*** • ***Fish & Wildlife,*** • ***T & E Species,*** • ***Water Quality,*** and • ***Wetlands.*** This training will not involve any unique impacts to ***Noise.***

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Both of these training options will require the construction of the same support facilities, consequently no unique construction or operations and maintenance costs are anticipated with this alternative.
		• ***Development costs.*** No unique development costs are anticipated.
		• ***Relative safety.*** Since no unsealed source radiological isotopes are used in exterior environments in this alternative, lower potential risks due to inadvertent exposure will occur.
		• ***Support requirements.*** Since no unsealed source radiological isotopes are used in exterior environments in this alternative, support requirements concerned with control and handling will be less than in the RCP Alternative.
		• ***Training flexibility.*** Because training will not involve the use of unsealed source radiological isotopes in an exterior training area, training flexibility will be improved.
		• ***Training realism, effectiveness.*** Training realism will be similar for both options.
6.2 NBC Equipment (Training Goal 6.2)		
Alternatives		
	RCP Alternative from FMC to FLW.	This training alternative involves: • classroom instruction, followed by, • instruction on the proper care, maintenance and use of NBC detection, identification and personnel/equipment decontamination equipment, • instruction on the proper use of the equipment is also performed at field/maneuver training areas and • at the Decontamination Apparatus Training Facility (DATF) and • a fit test in a gas chamber (filled with CS (tear) gas). This training is conducted in normal uniforms and in full NBC personal protective equipment. Although other training methods were reviewed as part of the analysis, relocation of the current training method was determined to be the only training alternative to accomplish this training goal.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
6.3 NBC, Decontamination, Advanced Proficiency Test (Toxic Agent) (Training Goal 6.3)				
	Alternatives			
			RCP Alternative from FMC to FLW.	This training alternative involves: • classroom instruction designed to refresh and augment the information provided to all military personnel and prepare students to operate in a toxic environment which includes: safety criteria, mask validation, scenario overview and medical screening and sharpen the proficiency skill of chemical specialists and • review of detection, identification and decontamination procedures required for various situations.
				This classroom training is followed by: • dress rehearsals in protective equipment in exterior training areas identical to the internal toxic training areas for initial entry students, • training in an engineering controlled interior toxic agent training area based upon the skill proficiency of the training class, after which • students detect, identify and decontaminate specific toxic agents in either a lock-step or scenario driven exercise. Student skill proficiency demonstration will involve decontamination of various pieces of equipment ranging from personal gear to crew served weapons and vehicles, followed by • decontamination of themselves and members of the team. This alternative will require construction of a facility similar to the existing Chemical Defense Training Facility (CDTF), including a thermal treatment unit (TTU) to dispose of non-hazardous wastes generated in training.
				Environmental Criteria: • ***Air Quality***. Operation of the TTU is estimated to require the use of approximately 4 million cubic feet of natural gas per year. The use of this natural gas will result in air emissions and therefore result in reduced air quality when compared to MTO 6.
				No differences between this alternative and MTO 6 are anticipated for the following environmental criteria: • ***Fish & Wildlife.*** • ***T & E Species.*** • ***Water Quality.*** • ***Wetlands.***

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This training option will require the construction and operation of a TTU at FLW. When compared to MTO 6 (which does not include the construction and operation of the TTU) the TTU will increase initial construction costs by approximately $5.3 million. Implementation of the RCP and operation of the TTU will also increase annual operations and maintenance costs by approximately $358,000 for natural gas and $290,000 for TTU operations and maintenance.
		• ***Development costs.*** Development of this alternative will require the modification of existing SOPs to reflect the new equipment and the testing of the TTU to ensure compliance with the existing State of Missouri, Permit to Construct. The estimated total cost for these development costs is estimated at approximately $40,000.
		• ***Relative safety.*** There are safety risks involved in the implementation of this alternative, however these risks are similar for MTO 6.
		• ***Support requirements.*** Maintenance of the TTU will require an estimated 5 person-years of effort. The costs for this maintenance are included in the operations and maintenance costs above.
		• ***Training flexibility.*** Construction of the TTU will provide the Chemical School complete flexibility to train and dispose of wastes based on a schedule that they control. The only limiting item in this area would be the potential for the TTU being out of service due to maintenance or mechanical failure at a time that it was needed. In approximately 10 years of operation at Fort McClellan this has not been an issue.
		• ***Training realism, effectiveness.*** Training realism will similar for both options.
6	Toxic Agent Training with Off-Post Waste Disposal (MTO 6).	This training alternative is identical to the RCP Alternative, except that disposal of decontaminated special wastes generated as a by-product of training will be off-site via a commercial contractor. Disposal of the training waste by-products will eliminate the requirement to construct and operate an on-site TTU.
		Environmental Criteria: • ***Air Quality.*** Elimination of the requirement to operation the TTU will eliminate the use of approximately 4 million cubic feet of natural gas per year. The elimination of this natural gas usage will result in reduce air emissions and therefore result in improved air quality when compared to the RCP Alternative.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
				No differences between this alternative and the RCP Alternative are anticipated for the following environmental criteria: • ***Fish & Wildlife.*** • ***T & E Species.*** • ***Water Quality.*** • ***Wetlands.***
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This training option will eliminate the need to construction and operation of a TTU at FLW. When compared to the RCP Alternative (which includes the construction and operation of the TTU) this options will decrease initial construction costs by approximately $5.3 million. Implementation of this options will also decrease annual operations and maintenance costs (when compared to the RCP Alternative) by approximately $358,000 for natural gas and $290,000 for TTU operation and maintenance. Shipment and disposal of the wastes off-post will increase operations costs by approximately $80,000 per year, resulting in net annual savings of approximately $568,000 per year.
				• ***Development costs.*** Development of this alternative will require the modification of existing SOPs. The total cost of these modifications are estimated at approximately $10,000, resulting in a $30,000 savings when compared to the RCP Alternative.
				• ***Relative safety.*** There are safety risks involved in the implementation of this alternative, however these risks are similar for MTO 6.
				• ***Support requirements.*** Implementation of this option will require the expansion of the existing FLW program for the manifesting of wastes. However when compared to the RCP Alternative this option is estimated to result in an estimated savings of 4 person-year of effort.
				• ***Training flexibility.*** Off-site disposal provides excellent flexibility as multiple disposal methods, contractors and locations are available. Selection of the off-site disposal method that will be implemented will depend upon a selection process that will be performed by the Army.
				• ***Training realism, effectiveness.*** Training realism will similar for both options.
	6.4 NBC, Survival Recovery (Training Goal 6.4)			
		Alternatives		
			RCP Alternative from FMC to FLW.	This alternative involves: • use of classroom instruction, followed by • more specific training on the individual types of NBC actions which may be required.

Table IV.2:
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Training Goal	Alternative Title	Detailed Alternative Description
		The more specific training includes the use of small quantities of: • materials designed to simulate chemical agents in both a lab/classroom environment and at exterior training areas, and • unsealed radiological isotope sources in a lab/classroom environment and at exterior training areas designated for training by the Health Physics Officer.
		Radiological isotope use at interior and exterior training areas is in accordance the existing NRC license (at FMC). This license allows for the use of both sealed and unsealed radiological isotope sources in interior and exterior training.
		The radiation laboratories use small quantities of many isotopes. Most of these are equipment check sources or low activity laboratory sources. The most common isotopes and the highest activity used in training are the following: • approximately 250 microcurie of Americium 241, • approximately 10 millicurie of Calcium 45, • approximately 100 millicurie of Cobalt 60, • approximately 120 curies of Cesium 137, • approximately 10 millicurie of Gold 198, • approximately 1 curie of Hydrogen 3, • approximately 100 millicurie of Nickel 63, • approximately 15 microcurie of Plutonium 239, • approximately 200 millicurie of Strontium-Yttrium 90, and • approximately 25 microcurie of Uranium 233.
		The majority of radiation training takes place in the laboratories, even though the school is licensed to operate an outside *alpha field* and one was built at FMC. The field has never been used for training and there are no plans to use the field in the future.
		The need to use unsealed radiological isotope sources in exterior training is very limited and the effects of nuclear fallout and high radiation levels may be effectively simulated through the use of the AN/TDQ-T1(V) continuous wave radio transmitter.
		Even though the use of unsealed source radiological isotopes in exterior training has not been performed at FMC, the RCP Alternative will include the ability for this training to occur within the limits of the existing NRC license at FLW, should the need arise.

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Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Chemical Agent Simulants include: *Methyl Salicylate* (MES) and *Diethyl Malonate* (DEM). Additional information on these simulants is included in training goal 3.2. Additionally, this training goal will require the use of the following approximate amounts of Persistent Chemical Agent Simulants (PCAS) each year: • 1,800 liters of Soman (GD), which consists of 2% sodium carbonate, 1% polyethylene oxide, 0.4% hydroxy ethyl cellulose, 10% glycerol, 13% Diethyl malonate and 74% water; • 1,800 liters of Mustard-Lewisite (HL), which consists of 2% ferrous ammonium sulphate, 0.3% polyethylene oxide, 0.4% hydroxy ethyl cellulose, 10% glycerol, 13% methyl salicylate and 75% water; and • 1,800 pints of Chemical Agent Disclosure Solution (CADS) which consists of 0.5% 2,2 Dipyridyl, 1% phenolphthalein, 70% isopropanol and 29% water.
		Additionally, this training method will include the use of a small quantity of colored smoke released from smoke grenades and canisters.
		Given the differences between this and the other training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
		Environmental Criteria: Since small amounts of unsealed source radiological isotopes may be used in exterior environments in this alternative, there is potential for adverse impacts to: • ***Air Quality.*** • ***Fish & Wildlife.*** • ***T & E Species.*** • ***Water Quality.*** • ***Wetlands.*** This training will not involve any unique impacts to ***Noise.***
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Both of these training options will require the construction of the same support facilities, consequently no unique construction or operations and maintenance costs are anticipated with this alternative. Each of the training methods will include the use of the Radiological Lab and will require the installation to obtain a license from the NRC.
		• ***Development costs.*** No unique development costs are anticipated.
		• ***Relative safety.*** Since unsealed radiological isotope sources might be used in an exterior training environment as part of this method, greater risks due to inadvertent exposure will occur.

Table IV.2:
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Training Goal	Alternative Title	Detailed Alternative Description
		• ***Support requirements.*** Since unsealed source radiological isotopes might be used in exterior environments in this alternative, support requirements will be greater due to control and handling issues.
		• ***Training flexibility.*** Since unsealed source radiological isotopes might be used in exterior environments, training flexibility will be limited.
		• ***Training realism, effectiveness.*** Training realism will similar for both options.
4	Simulation of Radiological Effects (MTO 4).	This alternative is identical to the RCP Alternative except that: • it limits training with unsealed radiological isotopes to a classroom/Lab environment.
		The training method will replace all exterior training with unsealed radiological isotope sources with the use of the AN/TDQ-T1(V) continuous wave radio transmitter. This represents a change that will restrict training to a greater extent than is currently called for in the existing NRC license at FMC.
		The use of chemical simulants and biological materials that simulate biological agents and sealed radiological sources (as called for the RCP Alternative) will remain unchanged in this alternative method.
		Given the differences between this and the other training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
		Environmental Criteria: Since radiological isotopes are not used in exterior environments in this alternative, there is less potential from this source for impacts to: • ***Air Quality,*** • ***Fish & Wildlife,*** • ***T & E Species,*** • ***Water Quality,*** and • ***Wetlands.*** This training will not involve any unique impacts to ***Noise.***
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Both of these training options will require the construction of the same support facilities, consequently no unique construction or operations and maintenance costs are anticipated with this alternative.
		• ***Development costs.*** No unique development costs are anticipated.

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Training Goal	Alternative Title	Detailed Alternative Description
		• ***Relative safety.*** Since no unsealed source radiological isotopes are used in exterior environments in this alternative, lower potential risks due to inadvertent exposure will occur.
		• ***Support requirements.*** Since no unsealed source radiological isotopes are used in exterior environments in this alternative, support requirements concerned with control and handling will be less than in the RCP Alternative.
		• ***Training flexibility.*** Because training will not involve the use of unsealed source radiological isotopes in an exterior training area, training flexibility will be improved.
		• ***Training realism, effectiveness.*** Training realism will be similar for both options.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
7. OBSCURANT PROCEDURES (Training Activity Group No. 7)		
7.1 Obscurant, Employment Principles (Training Goal 7.1)		
Alternatives		
	RCP Alternative from FMC to FLW.	This training alternative includes: • lectures in a general instruction classroom, • which are augmented by training aids that are brought into the classroom to help demonstrate the subject matter being discussed. Although other training methods were reviewed as part of the analysis, relocation of the current training method was determined to be the only viable training alternative to accomplish this training goal.
7.2 Obscurant, Employment (Basic Generator Operations and Static Operations) (Training Goal 7.2)		
Alternatives		
	RCP Alternative from FMC to FLW .	This training goal includes: • the use of general instruction classrooms to provide instruction on the goals, goals and use of obscurants on the battlefield, followed by • the use of various types of generators and obscurants to demonstrate proper dispersion.
		Lecture material covers the proper pre-start procedures and proper methods of generating fog oil smoke using the M3A4 (which will not be relocated to FLW), M56, M157 and the A/E 32U-13 (U.S. Air Force) generator systems, along with the grenade-based obscurant systems installed on the Armored Security Vehicle and HMMWVs. The M56 smoke generator system is designated as the M56 generator when mounted on a HMMWV or designated the M58 generator when mounted on a tracked vehicle. The M157 smoke generator system is designated the 1059 smoke generator when it is mounted on a tracked vehicle and is designated the 1037 smoke generator when mounted on a wheeled vehicle. The A/E 32U-13 (U.S. Air Force) generator system is very similar to the M56 generator, but it is trailer mounted and capable of dispensing approximately 3 gallons of fog oil per minute versus the maximum production capacity of the M56 generator of approximately 1.3 gallons per minute.
		Each of the training methods include these items, but the alternative methods vary: • the length of training, • the type of facility used for the training, or • include the use of simulators to augment training.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Under the RCP Alternative, each student will have the opportunity to operate each type of generator (M56 or M157) at a designated range for a minimum of 10 minutes. Because the starting procedures for the M157 are different from a cold start (less than 600 degrees) and from a hot start (warmer than 600 degrees), students will be provided 10 minutes for a cold start and 10 minutes for a hot start.
		The generators are located on concrete pads, with a collection system to collect water runoff and oil spills. This training method will dispense up to 20,000 gallons of fog oil per year. (It must be noted, however, that this analysis of training goals is designed to select the best method of accomplishing training. In practice the total amount of fog oil that will be used on a daily and annual basis will be determined by classes in session and training requirements. Consequently the amount of fog oil used for training goals 7.2, 7.3 and 7.4 may vary, but the total amount of fog oil used at the installation will not exceed the limits authorized in the State of Missouri, Air Quality Permit.)
		Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: The impact of training with obscurants (fog oil) on Air Quality, Fish & Wildlife, T & E species, Water Quality, Wetlands and Human Health and Safety is unclear at this point.
		Two studies are being conducted simultaneously with the EIS that are investigating the effects of obscurant training on humans and T & E species (with emphasis on the Indiana bat, gray bat and bald eagle). Until these studies are complete this secondary screening of Training Method Alternatives assumes that fog oil training will have little to no impact on humans and T & E species. This assumption is based on a review of the military specification for fog oil Type D and prior studies. The specification of Type D fog oil require the manufacture to certify that the fog oil will be non-carcinogenic and comply with numerous other quality control requirements. Based on the quality control requirements and the non-carcinogenic certification it is assumed that the little to no impact assumption is valid. If this assumption proves incorrect following the completion of the two studies, then this portion of the alternatives analysis will require modification to incorporate the potential impacts of training on human and biological resources.
		Nevertheless, if there is a potential impact from fog oil, methods which use more fog oil will have the greatest impact potential and methods that use less fog oil will have a lower relative potential to affect these resources. Consequently the relative impact potential for fog oil on the following environmental and training and operating efficiency criteria will be based on the quantity of fog oil that might potentially be used.

Table IV.2:
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Training Goal	Alternative Title	Detailed Alternative Description
		• ***Air Quality*** (although air quality at the installation boundary will be maintained in accordance with National Ambient Air Quality Standards (NAAQS), as required by the State of Missouri, Air Quality Permit), • ***Noise*** (based on the amount of time the generators will be used), • ***Fish & Wildlife,*** • ***T & E Species,*** • ***Water Quality,*** and • ***Wetlands.***
		Other unique features and relative differences between each of the alternatives will be discussed as part of the discussion of that alternative.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction costs for this alternative include the concrete pads and service pads, as well as a lined collection pond. These items have a cost of approximately $83,400.
		• ***Development costs.*** There will be no additional development costs anticipated for this training option. Implementation of MTO 6 will include the development of a simulator, the cost for that simulation system has been estimated at approximately $250,000.
		• ***Relative Safety***. This training method will require students to operate the generators for the longest period of time, resulting in a minor increase in potential safety concerns.
		• ***Support requirements.*** Based on an estimated usage of 20,000 gallons per year and an estimated of cost of $2.41 per gallon for fog oil, implementation of this training option will cost approximately $48,200 per year for fog oil. Based on an annual average temperature at FLW over 32 degrees F., diesel fuel will be used to power the generators. An additional approximately 2,590 gallons of diesel with an estimated cost of $0.97 per gallon will also be required each year to run the generators, resulting in an additional annual cost of approximately $2,512. The support requirements for each of the training options will vary based on the amount of fuel used. Additionally, MTO 6 will require a small amount of administrative staff effort to maintain the computer simulation system.
		• ***Training flexibility.*** The RCP Alternative and each of the Modified Training Options are limited by the requirement to limit opacity degradation (restricted visibility) at the installation boundary, consequently each of the training goals is limited by climatic/weather conditions. The implementation of MTO 6 will include the use of a computer simulation system that will provide increased flexibility and will allow classroom modeling of training exercises, regardless of weather conditions.

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Training Goal	Alternative Title	Detailed Alternative Description
		• ***Training realism, effectiveness.*** The RCP Alternative and each of the training options involve the use of the generation systems. They only vary the amount of time that students are allowed to operate the generators and where the training occurs. Consequently, the RCP Alternative and MTO 5 provide a minor increase in training effectiveness over MTO 6. However, each of these has been determined to provide the minimum amount of time for each student to become proficient in operations. MTO 6 will use less oil than the other options.
5	New Management Practices (MTO 5).	This training method is basically identical to the RCP Alternative, except that it: • replaces the use of a concrete roadway and spill collection system with new management practices that require students to clean up spills as they occur, • reduces the amount of time each student may operate the M56 generation system from approximately 20 minutes to approximately 5 minutes, • reduces the amount of time each student may operate the M157 generation system from a total of approximately 20 minutes to a total of approximately 4 minutes including 2 minutes for a hot start and 2 minutes for a cold start, • and by these differences in training procedures will lower the annual fog oil usage to up to 8,500 gallons per year.
		This option is also better suited to the use of the M56, M157 and A/E 32U-13 generating systems. The older management practice of using the concrete road and training pads was better suited to the M3A4 system which will not be used at FLW.
		Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: As discussed in the RCP Alternative, the impact of training with obscurants (fog oil) on Air Quality, Fish & Wildlife, T & E Species, Water Quality, Wetlands and Human Health and Safety is unclear at this point.

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Training Goal	Alternative Title	Detailed Alternative Description
		Nevertheless, if there is a potential impact from fog oil, methods which use more fog oil will have the greatest impact potential and methods that use less fog oil will have a lower potential to impact these resources. The relative impact potential for fog oil on the following environmental and training and operating efficiency criteria will be based on the quantity of fog oil that might potentially be used: • ***Air Quality,*** • ***Noise,*** • ***Fish & Wildlife,*** • ***T & E Species,*** • ***Water Quality,*** and • ***Wetlands.***
		Therefore this method will have a lower potential impact on these resources than the RCP Alternative, based on reducing fog oil uses from up to 20,000 gallons per year to up to 8,500 gallons per year.
		Training and Operating Efficiency Criteria: The RCP Alternative discussion contains the relative impacts of this training alternative on the following items:
		• ***Construction, operations and maintenance costs.*** This alternative eliminates the need for a concrete road and pads and a lined collection pond. Rock roads will be used instead. This will lower construction costs from approximately $83,400 to approximately $33,600.
		• ***Development costs.*** There will be no development costs associated with this option.
		• ***Support requirements.*** Based on an estimated usage of 8,500 gallons per year and an estimated of cost of $2.41 per gallon for fog oil, implementation of this training option will cost approximately $20,500 per year for fog oil. An additional approximately 1,100 gallons of diesel with an estimated cost of $0.97 per gallon will also be required each year to run the generators, resulting in an additional annual cost of approximately $1,067.
		• ***Relative safety.*** This alternative will reduce the amount of time students operate the generators, lowering safety risks when compared to the RCP Alternative.
		• ***Training flexibility.*** Because the alternative will reduce the amount of fog oil used there will be increased flexibility in scheduling the training within the established requirements of the Air Quality Permit.
		• ***Training realism, effectiveness.*** Training effectiveness will be similar to the RCP Alternative.

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Training Goal			Alternative Title	Detailed Alternative Description
		6	Reduced training time and M56 recirculation adapter (MTO 6).	This alternative includes the items discussed in the RCP Alternative, but would: • reduce the amount of time for starting each generator to 2 minutes for cold starts and 2 minutes for hot starts per student for the M157 generator system and • use an adapter on the M56 which collects the fog oil output and recycles it through the generator, resulting in reduced emissions.
				Consequently this alternative will reduce emissions from an estimated 8,500 gallons per year, if both generator systems were operated in the traditional manner, to up to 5,950 gallons per year under this alternative. This will consist of 3,808 gallons for One Station Unit Training, 553 gallons for the Officers Basic Course and 1,580 gallons for the Basic Non-Commissioned Officers Course.
				The turbine-based M56 can be fully operated without making smoke by using a fog oil recirculation kit. This allows the operator to fully exercise the system and see limited smoke production.
				To augment the training effectiveness of this option, a simulator will be developed that will allow students to practice turning the generators on and off without using fog oil. Until the simulator is available students will be training at the reduced time and oil-usage rate.
				If additional practice were required on the M56 system, this training will be performed using the "recycling" adapter or using water, thereby not increasing fog oil emissions.
				Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: As discussed in the RCP Alternative, the impact of training with obscurants (fog oil) on Air Quality, Fish & Wildlife, T & E Species, Water Quality, Wetlands and Human Health and Safety is unclear at this point.
				Nevertheless, if there is a potential impact from fog oil, methods which use more fog oil will have the greatest impact potential and methods that use less fog oil will have a lower potential to affect these resources. The relative impact potential for fog oil on the following environmental and training and operating efficiency criteria will be based on the quantity of fog oil that might potentially be used: • ***Air Quality,*** • ***Noise,*** • ***Fish & Wildlife,*** • ***T & E Species,*** • ***Water Quality,*** • ***Wetlands.***

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Training Goal	Alternative Title	Detailed Alternative Description
		Therefore this method will present a reduced risk, when compared to either the RCP Alternative or the MTO 5.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This alternative eliminates the need for a concrete road and pads and a lined collection pond. Rock roads will be used instead, lowering construction costs from approximately $83,400 to $33,600.
		• ***Development costs.*** Implementation of this MTO will result in development costs associated with a new simulator system. The system is estimated to cost approximately $250,000.
		• ***Support requirements.*** Based on an estimated emission of 5,950 gallons of fog oil per year and a cost of $2.41 per gallon for fog oil, implementation of this training option will cost approximately $14,300 per year for fog oil. An additional approximately 600 gallons of diesel with an estimated cost of $0.97 per gallon will also be required each year to run the generators, resulting in an additional annual cost of $582. This training method will include a minor increase in support costs associated with a small amount of administrative staff effort to maintain the computer simulation system.
		• ***Relative safety.*** Because this alternative reduces the amount of time students operate the generators and reduces the amount of fog oil used, it will have the highest relative level of safety when compared to the other alternatives.
		• ***Training flexibility.*** The implementation of this MTO will include the use of a collection system on the M56 that will provide increased flexibility and allow training on the M56 regardless of weather conditions or other training requirements. This alternative also includes the development of a new simulation system that will allow training to be performed without emissions. This simulator will augment the training provided on the generators, further increasing training flexibility and effectiveness. The simulator has not yet been developed.

		• ***Training realism, effectiveness.*** Implementation of this option will offset the decreased training time which occurs with a reduction in fog oil usage by:
		  • training on the M56 with the collection adapter in place, and
		  • through the development of a new simulation system.
		Training in a realistic military operational environment is critical to ensuring a thorough understanding of the effects of meteorological condition and to train the selection of the proper obscurant and dispersion methods. The simulator has not been developed, and the long-term reliability and maintenance history information on the collection adapter manifolds are not available.

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Training Goal			Alternative Title	Detailed Alternative Description
		7	Water/recycle manifold (MTO 7).	This alternative includes the items discussed in the RCP Alternative, but would: • provide unlimited time for practice starting and stopping each generator system and • use an adapter on the M56 which collects the fog oil output and recycles it through the generator, resulting in reduced emissions, and • use a "water manifold" on the M157 which allows the use of tap water to cool the engine rather than fog oil, resulting in reduced emissions, and • accomplish additional training by substituting water for fog oil.
				To allow students to experience fog oil emissions and to demonstrate actual operation of the M56, each class will include the use of approximately 3 gallons of fog oil without the collection adapter in place. Each class will also include 2 minutes of M157 operation with fog oil. This training will use less than 500 gallons of fog oil per year (for Army training).
				The turbine-based M56 can be fully operated without making smoke by using a fog oil recirculation kit.
				The pulse jet-based M157 can be fully operated using tap water instead of fog oil to cool the engine. Using a water manifold fog oil is recirculated into the fog oil tank and the water is vaporized by the pulse jet engine.
				U.S. Air Force static training will continue to use the A/E 32U-13 generator. Although this generator of similar to the Army M56 system, an recycling adapter has not yet been developed for this system. Consequently training on the A/E 32U-13 generator system will result in the emission of up to 500 gallons of fog oil per year (for Air Force training).
				Total fog oil emissions for this alternative will be limited to up to 1,000 gallons per year.
				Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: As discussed in the RCP Alternative, the impact of training with obscurants (fog oil) on Air Quality, Fish & Wildlife, T & E Species, Water Quality, Wetlands and Human Health and Safety is unclear at this point.

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Training Goal	Alternative Title	Detailed Alternative Description
		Nevertheless, if there is a potential impact from fog oil, methods which use more fog oil will have the greatest impact potential and methods that use less fog oil will have a lower potential to affect these resources. The relative impact potential for fog oil on the following environmental and training and operating efficiency criteria will be based on the quantity of fog oil that might potentially be used: • ***Air Quality,*** • ***Noise,*** • ***Fish & Wildlife,*** • ***T & E Species,*** • ***Water Quality,*** • ***Wetlands.***
		Therefore this method will present a reduced risk, when compared to either the RCP Alternative or the Modified Training Options 5 and 6. However, this option may generate large amounts of ice during winter/freezing conditions that could impact vegetative growth near the training area.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This alternative eliminates the need for a concrete road and pads and a lined collection pond. Rock roads will be used instead, lowering construction costs from approximately $83,400 to $33,600.
		• ***Development costs.*** No development costs are anticipated.
		• ***Support requirements.*** Based on an estimated emission of 1,000 gallons of fog oil per year and a cost of $2.41 per gallon for fog oil, implementation of this training option will cost approximately $2,400 per year for fog oil. An additional approximately 160 gallons of diesel with an estimated cost of $0.97 per gallon will also be required each year to run the generators, resulting in an additional annual cost of $155.
		• ***Relative safety.*** Because this alternative reduces the amount of time students operate the generators with fog oil emissions and reduces the amount of fog oil used, it will have the highest relative level of safety when compared to the other alternatives. Use of water during freezing conditions could result in ice build-up and reduced safety as a result of potential slips and slides.
		• ***Training flexibility.*** The implementation of this MTO will include the use of a collection system on the M56 and a water manifold on the M157 that will provide increased flexibility and allow training on these systems regardless of weather conditions, although long-term reliability and maintenance information for the water manifolds in freezing weather is not yet available.

Table IV.2:
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Training Goal	Alternative Title	Detailed Alternative Description
		• ***Training realism, effectiveness.*** Implementation of this option will offset the decreased training time which occurs with a reduction in fog oil usage by training on the M56 with the collection adapter in place and through the use of the water manifold in the M157 system. The requirement to learn how to operate the smoke generation system under realistic weather conditions remains.
7.3 Obscurant, Employment Proficiency Test (Mobile Operations) (Training Goal 7.3)		
Alternatives		
	RCP Alternative from FMC to FLW.	Following the training discussed in Section 7.1, this training includes: • additional instruction at the field training area on the goals and goals, and • use of maneuver obscuration on the battlefield.
		This training is followed by refresher training on meteorological information and control parameters. Students are then tasked with obscuring a designated target and required to develop and implement an execution plan. Equipment familiarization, operator training and a field/maneuver demonstration of capability follows the refresher training as students attempt to use obscurant equipment to conceal the designated target using fog oil based obscurant.
		Lecture material covers the proper pre-start procedures and proper methods of generating fog oil smoke using the M3A4 (which will not be relocated to FLW), M56, M157 and the A/E 32U-13 (U.S. Air Force) generator systems, along with the grenade-based obscurant systems installed on the Armored Security Vehicle and HMMWVs.
		Training on the use of the grenade-based obscurant systems installed on Armored Security Vehicle and HMMWVs will be limited to lectures and demonstrations by instructors. Use of the system by students will not be included in the POIs. This will limit the total number of smoke grenades used in this training to less than 250 smoke grenades per year. This level of training is included in all of the training options included in this analysis.
		The differences between the other methods available for meeting this training goal involve: • changing the quantity of fog oil used and • development of a simulation system to augment this training.
		Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: The impact of training with obscurants (fog oil) on Air Quality, Fish & Wildlife, T & E species, Water Quality, Wetlands and Human Health and Safety is unclear at this point.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Two studies are being conducted simultaneously with the EIS that are investigating the effects of obscurant training on humans and T & E species (with emphasis on the Indiana bat, gray bat and bald eagle). Until these studies are complete this secondary screening of Training Method Alternatives assumes that fog oil training will have little to no impact on humans and T & E species. This assumption is based on a review of the military specification for fog oil Type D and prior studies that are inconclusive. The specification of Type D fog oil require the manufacture to certify that the fog oil will be non-carcinogenic and comply with numerous other quality control requirements. Based on the quality control requirements and the non-carcinogenic certification it is assumed that the little to no impact assumption is valid.
		If this assumption proves incorrect following the completion of the two studies, then this portion of the alternatives analysis will require modification to incorporate the potential impacts of training on human and biological resources.
		Nevertheless, if there is a potential impact from fog oil, methods which use more fog oil will have the greatest impact potential and methods that use less fog oil will have a lower potential to affect these resources. Consequently the relative impact potential for fog oil on the following environmental and training and operating efficiency criteria will be based on the quantity of fog oil that might potentially be used: • ***Air Quality*** (although air quality at the installation boundary will be maintained in accordance with NAAQS standards, as required by the State of Missouri, Air Quality permit), • ***Noise*** (based on the amount of time the generators will be used), • ***Fish & Wildlife,*** • ***T & E Species,*** • ***Water Quality,*** and • ***Wetlands.***
		Other unique features and relative differences between each of the alternatives will be discussed as part of the discussion of that alternative.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction, operations and maintenance costs will be similar for both alternatives.
		• ***Development costs.*** There will be no additional development costs anticipated for this training option.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Support requirements.*** Based on an estimated usage of up to 30,000 gallons per year by Active Component personnel and 11,500 gallons per year by Reserve Component personnel for a total of up to 41,500 gallons per year and an estimated of cost of $2.41 per gallon for fog oil, implementation of this training option will cost approximately $100,000 per year for fog oil. An additional approximately 5,370 gallons of diesel with an estimated cost of $0.97 per gallon will also be required each year to run the generators, resulting in an additional annual cost of approximately $5,200.
		• ***Relative Safety***. Because this training method will increase the amount of fog oil used and the effects of fog oil on human health are undetermined, this alternative will have the greatest potential for affecting human health.
		• ***Training flexibility.*** The RCP Alternative and each of the Modified Training Options are limited by the requirement to limit opacity degradation (restricted visibility) at the installation boundary. Since obscurant behavior is affected by climatic/weather conditions each of the training goals is limited by these conditions.
		• ***Training realism, effectiveness.*** The RCP Alternative and other the training option involve the use of the generation systems, they only vary the amount of time that students are allowed to operate the generators. Consequently the RCP Alternative provides a very minor increase in training effectiveness over MTO 5 based on operating time. However, each of these has been determined to provide the minimum amount of time for each student to become proficient in operations.
5	Reduced fog oil consumed (MTO 5).	This alternative includes the items discussed in the RCP Alternative above, but will reduce the amount of fog oil consumed to up to 100 gallons per day. This alternative training method will dispense up to 8,500 gallons of fog oil per year, with an additional 11,500 gallons used by Reserve Component personnel, resulting in a total requirement for up to 20,000 gallons per year.
		Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: As discussed in the RCP Alternative, the impact of training with obscurants (fog oil) on Air Quality, Fish & Wildlife, T & E Species, Water Quality, Wetlands and Human Health and Safety is unclear at this point.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Nevertheless, if there is a potential impact from fog oil, methods which use more fog oil will have the greatest impact potential and methods that use less fog oil will have a lower potential to affect these resources. The relative impact potential for fog oil on the following environmental and training and operating efficiency criteria will be based on the quantity of fog oil that might potentially be used. • ***Air Quality,*** • ***Noise,*** • ***Fish & Wildlife,*** • ***T & E Species,*** • ***Water Quality,*** and • ***Wetlands.*** This method uses less fog oil than the RCP Alternative and MTO 2, resulting in a reduced potential for impact.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** These costs will be similar under both alternatives.
		• ***Development costs.*** Implementation of this training options will result in no development costs.
		• ***Relative safety.*** The reduced quantity of fog oil used and the reduced time spent operating the equipment will reduce the potential for human health and safety issues.
		• ***Support requirements.*** Based on using an estimated 20,000 gallons of fog oil per year at an estimated cost of $2.41 per gallon for fog oil, implementation of this training option will cost approximately $40,000 per year for fog oil. An additional approximately 2,590 gallons of diesel with an estimated cost of $0.97 per gallon will also be required each year to run the generators, resulting in an additional annual of cost of approximately $2,500.
		• ***Training flexibility.*** This training option will have a similar level of training flexibility to the RCP Alternative, although the reduced level of fog oil usage will increase the amount of time in which training could occur.
		• ***Training realism, effectiveness.*** This training option will have an overall training effectiveness level slightly lower than the RCP Alternative based on the reduced amount of time that students will be operating the generators. This level of training is adequate to meet the minimum training requirements.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
7.4 Obscurant, Employment Proficiency Test (Field Training Exercises) (Training Goal 7.4)		
Alternatives		
	RCP Alternative from FMC to FLW .	Each of the training methods for accomplishing this training goal include: • classroom instruction to provide additional instruction on the goals, goals and use of obscurant on the battlefield (basic instruction is conducted as part of the introduction and static smoke operations) and • field/maneuver training exercises that lasts approximately three days and two nights.
		During the field/maneuver training exercises students must coordinate the ability to generate and maintain obscurant with the requirement for the battlefield commander to have specific locations obscured at specific times. Working with meteorological data and forecasts the students must develop and implement an operational plan to support the battlefield commander.
		The differences between this and the other training alternatives involves the amount of obscurant (fog oil) that is used to complete the training. Additionally, although this analysis of training options will review the potential impacts of using fog oil in quantities and concentrations greater than currently authorized by the State of Missouri, Air Quality Permit, it is the intent of the U.S. Army to follow the restrictions placed on this training by that permit.
		Under the RCP Alternative, the total amount of fog oil which might be used at FLW will equal up to 125,000 gallons per year, with up to 64,000 gallons used in field training each year. An additional 20,000 gallons will be used for static training, 30,000 gallons used for Active Component mobile training and 11,500 gallons used for Reserve Component mobile training as discussed under training goals 7.2 and 7.3.
		It must be noted, however, that this analysis of training goals is designed to select the best method of accomplishing training. In practice the total amount of fog oil that will be used on a daily and annual basis will be determined by classes in session, training requirements and the maximum allocation specified in the air quality permit. Consequently the amount of fog oil used for training goals 7.2, 7.3 and 7.4 may vary, but the total amount of fog oil used at the installation will not exceed the limits authorized in the State of Missouri, Air Quality Permit.
		Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Environmental Criteria: The impact of training with obscurants (fog oil) on Air Quality, Fish & Wildlife, T & E species, Water Quality, Wetlands and Human Health and Safety is unclear at this point.
		Two studies are being conducted simultaneously with the EIS that are investigating the effects of obscurant training on humans and T & E species (with emphasis on the Indiana bat, gray bat and bald eagle). Until these studies are complete this secondary screening of Training Method Alternatives assumes that fog oil training will have little to no impact on humans and T & E species. This assumption is based on a review of the military specification for fog oil Type D and prior studies that are inconclusive. The specification of Type D fog oil require the manufacture to certify that the fog oil will be non-carcinogenic and comply with numerous other quality control requirements. Based on the quality control requirements and the non-carcinogenic certification it is assumed that the little to no impact assumption is valid.
		If this assumption proves incorrect following the completion of the two studies, then this portion of the alternatives analysis will require modification to incorporate the potential impacts of training on human and biological resources.
		Nevertheless, if there is a potential impact from fog oil, methods which use more fog oil will have the greatest impact potential and methods that use less fog oil will have a lower potential to affect these resources. Consequently the relative impact potential for fog oil on the following environmental and training and operating efficiency criteria will be based on the quantity of fog oil that might potentially be used: • ***Air Quality*** (although air quality at the installation boundary will be maintained in accordance with NAAQS standards, as required by the State of Missouri, Air Quality permit), • ***Noise*** (based on the amount of time the generators will be used), • ***Fish & Wildlife,*** • ***T & E Species,*** • ***Water Quality,*** and • ***Wetlands.***
		Other unique features and relative differences between each of the alternatives will be discussed as part of the discussion of that alternative.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction costs will not be appreciably different between the other training options.
		• ***Development costs.*** Implementation of MTO 3 will include the development of a simulator. The cost for that system has been estimated at approximately $250,000.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Support requirements.*** Based on an estimated cost of $2.41 per gallon, implementation of this training option (which will use up to 64,000 gallons per year) will cost approximately $154,000 per year for fog oil An additional 8,280 gallons of diesel with an estimated cost of $0.97 per gallon will also be required each year to run the generators, resulting in an additional annual cost of approximately $8,000. The support requirements for each of the training options will be similar, except that MTO 3 will require a small amount of administrative staff effort to maintain the computer simulation system.
		• ***Relative Safety***. Because this training method will involve the greatest use of fog oil and the longest operating periods for the generators, it will have the highest relative safety risk of the alternatives.
		• ***Training flexibility.*** The RCP Alternative and each of the Modified Training Options are limited by the requirement to limit opacity degradation (restricted visibility) at the installation boundary. Since obscurant behavior is affected by climatic/weather conditions each of the training goals is limited by these conditions. The implementation of MTO 3 will include the use of a computer simulation system that will provide increased flexibility and will allow classroom modeling to augment training exercises, reducing the impact of weather conditions. The use of the simulator will also allow for the modeling of geographic and weather conditions that are not present at FLW, increasing training flexibility and effectiveness.
		• ***Training realism, effectiveness.*** The RCP Alternative and each of the training options involve the use of the generation systems, they only vary the amount of time that students are allowed to operate the generators. Consequently the RCP Alternative provides a minor increase in training effectiveness over Modified Training Options 1 and 2, however each of these has been determined to provide the minimum amount of time for each student to become proficient in operations. Implementation of MTO 3 will decrease the effectiveness of the training, since the amount of time that each student will be able to model and experience obscurants will be less than desired. MTO 3, in addition to using less oil than the other options, will allow use of a computer to augment the field training.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
1	Reduced Fog-Oil Consumption - up to a total of 56,000 gallons per year (MTO 1)	The differences between this and the other training alternatives involves the amount of obscurant (fog oil) that is used to complete the training. Under MTO 1, the total amount of fog oil which might be used at FLW will equal up to 84,500 gallons per year, with up to 56,000 gallons dedicated to this training goal. The remainder of the fog oil will be used to support training completed under training goals 7.2 and 7.3 and will include 1,000 gallons per year for static training, 8,500 gallons per year for Active Component mobile training and 11,500 gallons per year for Reserve Component mobile training.
		Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: As discussed in the RCP Alternative, the impact of training with obscurants (fog oil) on Air Quality, Fish & Wildlife, T & E Species, Water Quality, Wetlands and Human Health and Safety is unclear at this point.
		Nevertheless, if there is a potential impact from fog oil, methods which use more fog oil will have the greatest impact potential and methods that use less fog oil will have a lower potential to affect these resources. The relative impact potential for fog oil on the following environmental and training and operating efficiency criteria will be based on the quantity of fog oil that might potentially be used: • ***Air Quality,*** • ***Noise,*** • ***Fish & Wildlife,*** • ***T & E Species,*** • ***Water Quality,*** and • ***Wetlands***.
		Therefore this method will have the second greatest potential for impact of the training methods.
		It must be noted, however, that this analysis of training goals is designed to select the best method of accomplishing training. In practice the total amount of fog oil that will be used on a daily and annual basis will be determined by classes in session, training requirements and the maximum allocation specified in the air quality permit. Consequently the amount of fog oil used for training goals 7.2, 7.3 and 7.4 may vary, but the total amount of fog oil used at the installation will not exceed the limits authorized in the State of Missouri, Air Quality Permit.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Training and Operating Efficiency Criteria: The RCP Alternative discussion contains the relative impacts of this training alternative on the following items: • ***Construction, operations and maintenance costs,*** Construction costs will not be appreciably different between the other training options.
		• ***Development costs***. There are no additional development costs anticipated for this training option.
		• ***Relative safety***. Because this alternative will involve short time frames for equipment operation and reduce emissions of fog oil (when compared to the RCP Alternative) it will have a reduced potential for safety and health impacts
		• ***Support requirements,*** Based on an estimated cost of $2.41 per gallon of fog oil, implementation of this training method (which will use up to 56,000 gallons per year versus 64,000 gallons in the RCP Alternative) will result in reduced support costs of approximately $135,000 per year for fog oil An additional approximately 7,245 gallons of diesel with an estimated cost of $0.97 per gallon will also be required each year to run the generators, resulting in an additional annual cost of approximately $7,000.
		• ***Training flexibility.*** The reduced amount of time that the generators will be operated will increase the number of days in which training can occur and still be in compliance with the State of Missouri Air Quality Permit. This increased flexibility in scheduling is offset by decreased flexibility in training as a result of decreased operational time, resulting in no net difference in flexibility when compared to the RCP Alternative.
		• ***Training realism, effectiveness.*** The reduced amount of time that students will be able to operate the generators will result in a very slight reduction in the effectiveness of this training; however, it has been determined that this reduction will not affect the qualifications of personnel completing the training.
2	Reduced Fog-Oil Consumption - up to a total of 44,000 gallons per year (MTO 2)	The differences between this and the other training alternatives involves the amount of obscurant (fog oil) that is used to complete the training. Under MTO 2, the total amount of fog oil which might be used at FLW will equal up to 64,500 gallons per year, with up to 44,000 gallons dedicated to this training goal. The remainder of the fog oil will be used to support training completed under training goals 7.2 and 7.3 and will include up to 1,000 gallons per year for static training and 20,000 gallons per year for mobile training.
		Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Environmental Criteria: As discussed in the RCP Alternative, the impact of training with obscurants (fog oil) on Air Quality, Fish & Wildlife, T & E Species, Water Quality, Wetlands and Human Health and Safety is unclear at this point.
		Nevertheless, if there is a potential impact from fog oil, methods which use more fog oil will have the greatest impact potential and methods that use less fog oil will have a lower potential to affect these resources. The relative impact potential for fog oil on the following environmental and training and operating efficiency criteria will be based on the quantity of fog oil that might potentially be used: • ***Air Quality,*** • ***Noise,*** • ***Fish & Wildlife,*** • ***T & E Species,*** • ***Water Quality,*** and • ***Wetlands.*** Therefore this method will have the third greatest potential for impact of the training methods being considered.
		Training and Operating Efficiency Criteria: The RCP Alternative discussion contains a discussion of the relative impacts of this training alternative on method on the following items: • ***Construction, operations and maintenance costs,*** and • ***Development costs.***
		• ***Relative Safety.*** This alternative will further reduce the amount of time that the generators will be operated and the amount of fog oil that will be emitted. This will result in a lower level of potential safety hazards during the operation of the generator and a lower level of potential human health hazards associated with emission of fog oil.
		• ***Support requirements.*** Based on an estimated cost of $2.41 per gallon of fog oil for 44,000 gallons of fog oil, implementation of this training option will cost approximately $106,000 year for fog oil. In addition, approximately 5,290 gallons of diesel with an estimated cost of $0.97 per gallon will also be required to run the generators, resulting in an additional annual cost of approximately $5,100.
		• ***Training Flexibility.*** As discussed in MTO 1, the reduced fog oil emissions, when compared to the RCP Alternative, will increase the number of days on which training can occur. However, the reduced number of hours that students can operate the generators will start to have an adverse impact on class training.

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Training Goal	Alternative Title	Detailed Alternative Description
		• ***Training realism, effectiveness.*** The reduced amount of time available for students to operate the generators will result in some students not being able to function in each of the positions on an obscurant team. This will decrease overall training effectiveness.
3	Reduced Fog-Oil Consumption - up to a total of 28,500 gallons per year augmented by a simulator (MTO 3)	The differences between this and the other training alternatives involves the amount of obscurant (fog oil) that is used to complete the training and the use of a simulator to augment field training, thereby allowing a reduction in the amount of fog oil used in training. Under MTO 3, the total amount of fog oil which might be used at FLW will equal up to 49,500 gallons per year, with up to 28,500 gallons dedicated to this training goal. The remainder of the fog oil will be used to support training completed under training goals 7.2 and 7.3, while 1,000 gallons per year is used on static training and 20,000 gallons per year is used on mobile training.
		The reduced level of time available for training on the generators will be augmented by the development and use of a simulator system that will allow for the tracking of obscurants on a computer. The computer model will track the obscurants movement and dissipation based on terrain, wind speed and direction and atmospheric stability. Until a simulator is developed training will be accomplished at the reduced fog oil consumption rate.
		Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: As discussed in the RCP Alternative, the impact of training with obscurants (fog oil) on Air Quality, Fish & Wildlife, T & E Species, Water Quality, Wetlands and Human Health and Safety is unclear at this point.
		Nevertheless, if there is a potential impact from fog oil, methods which use more fog oil will have the greatest impact potential and methods that use less fog oil will have a lower potential to affect these resources. The relative impact potential for fog oil on the following environmental and training and operating efficiency criteria will be based on the quantity of fog oil that might potentially be used: • ***Air Quality,*** • ***Noise,*** • ***Fish & Wildlife,*** • ***T & E Species,*** • ***Water Quality,*** and • ***Wetlands.*** Therefore this method will have the least potential for impact of the training methods being considered

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening		
Training Goal	**Alternative Title**	**Detailed Alternative Description**
		Because this training method will include the construction of an additional simulator, there will be a short-term potential for impact to these environmental criteria associated with the construction.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction of a 2,000 square-foot simulator room with an estimated cost of approximately $410,000 will be required. This area will have operations and maintenance costs of approximately $4,000 per year.
		• ***Development costs.*** Implementation of MTO 3 will include the development of a simulator, the cost for that simulation system has been estimated at approximately $250,000.
		• ***Relative Safety.*** The reduced hours of generator operation coupled with reduced fog oil emissions will result in the lowest potential for safety and health impacts associated with training. This reduced potential for impact will be counterbalanced by the short-term potential for impact associated with the construction of the simulator training area.
		• ***Support requirements.*** Based on an estimated cost of $2.41 per gallon of fog oil, implementation of this training option will cost approximately $62,700 year for fog oil. In addition, approximately 3,750 gallons of diesel with an estimated cost of $0.97 per gallon will also be required to run the generators, resulting in an additional annual cost of approximately $3,600.
		• ***Training flexibility.*** The implementation of MTO 3 will include the use of a computer simulation system that will provide increased flexibility and will allow classroom modeling of training exercises, regardless of weather conditions. The use of the simulator will also allow for the modeling of geographic and weather conditions that are not present at FLW, increasing training flexibility and effectiveness. The training computer simulation system has not been developed, therefore the training flexibility is difficult to access.
		• ***Training realism, effectiveness.*** Implementation of this option will offset the decreased level of training which occurs with a reduction in fog oil usage with training on a simulator. The overall effectiveness of this training will be higher than the anticipated effectiveness of training in the field alone as the simulator will be able to model geographic and weather conditions that are not available at FLW. The training computer simulation system has not been developed, therefor the level of training realism, effectiveness is difficult to access. If the system becomes available, the ability to practice making smoke using other weather conditions than those commonly found at FLW will assist smoke planners in training.

Table IV.2:
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Training Goal	Alternative Title	Detailed Alternative Description
7.5 Obscurant, Generator Maintenance (Training Goal 7.4)		
Alternatives		
RCP Alternative from FMC to FLW.		The alternative includes the use of: • classroom instruction, followed by • the use of typical pieces of equipment to demonstrate operator level maintenance procedures in area that lacks stormwater control, and • actual hands-on equipment maintenance by students to demonstrate proficiency. Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: • ***Air Quality.*** There will be less potential for short-term air quality emissions associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***Noise.*** There will be less potential for short-term noise impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***Fish & Wildlife.*** There will be less potential for short-term fish & wildlife impacts levels associated with this alternative due to the lower level of construction required when compared to MTO 3. However there will be a greater potential for water quality impacts with this alternative than with MTO 4.
		• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. However there will be a greater potential for water quality impacts with this alternative than with MTO 4.
		• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. However there will be a greater potential for water quality impacts with this alternative than with MTO 4.

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Training Goal	Alternative Title	Detailed Alternative Description
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This alternative will use existing, available maintenance and classroom facilities for instruction on generator maintenance. Consequently no additional construction will be required to support this training goal.
		• ***Development costs.*** This training method will not require the development of new training methods or simulators.
		• ***Relative safety.*** Since this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced when compared to MTO 3. Long-term safety will remain relatively similar for Modified Training Options 3 and 4, as all of these options will consist of primarily classroom instruction.
		• ***Support requirements.*** The will be no additional support costs associated with this training method.
		• ***Training flexibility.*** Without a simulator, as called for in MTO 3, it will be more difficult for students requiring remedial or advanced training to work through additional exercises without instructor support. This makes this training method less flexible than MTO 3.
		• ***Training realism, effectiveness.*** Implementation of this training method will provide the highest degree of realism and effectiveness
3	Simulated Maintenance (MTO 3).	This alternative involves: • development and use of a maintenance simulator which will allow for students to perform maintenance in a controlled environment and on a specifically designed system that will replicate maintenance requirements. Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: • ***Air Quality.*** There will be an increased potential for short-term air quality emissions associated with this alternative due to the higher level of construction required. The potential for long-term air quality emissions will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***Noise.*** There will be an increased potential for short-term noise impacts associated with this alternative due to the higher level of construction required. The potential for long-term noise increases will be similar to the other alternatives as this training method consists primarily of classroom instruction.

Table IV.2:
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Training Goal	Alternative Title	Detailed Alternative Description
		• ***Fish & Wildlife.*** There will be an increased potential for short-term fish & wildlife impacts levels associated with this alternative due to the higher level of construction required. The potential for long-term fish and wildlife habitat deterioration or recuperation will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***T & E Species.*** There will be an increased potential for short-term T & E species impacts associated with this alternative due to the higher level of construction required. The potential for long-term T & E species habitat degradation or improvement will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***Water Quality.*** There will be an increased potential for short-term water quality impacts associated with this alternative due to the higher level of construction required.
		• ***Wetlands.*** There will be an increased potential for short-term wetlands impacts associated with this alternative due to the higher level of construction required.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction of approximately two additional 50-person simulation areas with approximately 2,100 square feet each, at a cost of approximately $825,000, will be required to accommodate the simulators. Additional operations and maintenance costs associated with this additional classroom will cost an estimated $6,900 per year.
		• ***Development costs.*** There will be a cost of approximately $250,000 to develop the maintenance simulator.
		• ***Relative safety.*** Since this option will increase the amount of construction required, the short-term potential for safety concerns during construction will be increased. Long-term safety will remain relatively similar for the RCP Alternative and MTO 4, since all the options will consist of primarily classroom instruction.
		• ***Support requirements.*** The development and use of a simulator will require an increased in administrative support to ensure the simulator is programmed properly and maintained.
		• ***Training flexibility.*** With a simulator, as called for in this option, it is easier for students requiring remedial or advanced training to work through additional exercises without instructor support. This makes this training method more flexible than the other training methods. However as changes are made in the equipment and new models fielded, the flexibility of training to support these changes will be reduced until a new simulator will be fielded.

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Training Goal	Alternative Title	Detailed Alternative Description
		• ***Training realism, effectiveness.*** The performance of maintenance on real pieces of equipment provides the highest degree of realism possible, however the training is limited by the amount of support required to set up equipment that needs maintenance. In a simulator an instructor will be more able to challenge students by changing the level of fluids of the readings that will be provided.
4	Modified Current Practice (MTO 4).	This alternative involves: • classroom instruction, followed by • the use of typical pieces of equipment to demonstrate operator level maintenance procedures (but in an area that provides stormwater control), and • actual hands-on equipment maintenance by students to demonstrate proficiency. This option varies from the RCP Alternative in that the use of vehicles for training in exterior training areas will be limited to areas that have controlled stormwater collection to prevent the inadvertent runoff of contaminated stormwater.
		Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: • ***Air Quality.*** There will be less potential for short-term air quality emissions associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***Noise.*** There will be less potential for short-term noise impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***Fish & Wildlife.*** There will be less potential for short-term fish & wildlife impacts levels associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
		• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term water quality impacts will be slightly less for this alternative than for the RCP Alternative.

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Training Goal	Alternative Title	Detailed Alternative Description
		• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term wetlands deterioration for this alternative will be slightly less than the RCP Alternative.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This alternative will use existing, available maintenance and classroom facilities for instruction on generator maintenance. Consequently no additional construction will be required to support this training goal.
		• ***Development costs.*** This training method will not require the development of new training methods or simulators.
		• ***Relative safety.*** Since this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced when compared to MTO 3.
		• ***Support requirements.*** There will be no additional support costs associated with this training method.
		• ***Training flexibility.*** Without a simulator, as called for in MTO 3, it will be more difficult for students requiring remedial or advanced training to work through additional exercises without instructor support. This makes this training method less flexible than MTO 3.
		• ***Training realism, effectiveness.*** The performance of maintenance on real pieces of equipment provides the highest degree of realism possible, but is limited by the amount of support required to set up equipment that needs maintenance. In a simulator an instructor will be more able to challenge students by changing the level of fluids of the readings that will be provided.
7.6 Obscurant, Storage Operations (Training Goal 7.6)		
Alternatives		
	RCP Alternative from FMC to FLW .	Each of the training methods for this training goal will include: • classroom instruction • followed by hands-on training. The differences between the training methods involve the type of training facility used for the hands-on training. Under the RCP Alternative hands-on training will be conducted in decentralized uncovered oil storage areas. Consequently, it is anticipated that this alternative will have the following impacts relative to the other training methods.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			Alternative Title	Detailed Alternative Description
				Environmental Criteria: None of the four alternatives will have a significant difference in their impact on the following criteria. Each of the alternatives will require the construction of approximately the same size area. • ***Air Quality***. • ***Noise.***
				Because this alternative and MTO 4, will provide decentralized storage the construction will be performed in two separate locations. Consequently there will be an increased potential for impacts from these alternatives on the following criteria: • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands***.
				Additionally, because this alternative (and MTO 3) will be uncovered is it anticipated that it will have a greater potential for impact on the following criteria: • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands.***
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Implementation of this alternative will result in the construction of more than one uncovered storage area. This will result in a lower construction cost than Modified Training Options 4 or 5, but a slightly higher cost than MTO 3. Operations and maintenance costs for covered storage areas will also be slightly higher.
				• ***Development costs.*** The will be no additional development costs associated with any of these options.
				• ***Relative safety.*** Long-term safety will remain relatively similar for the uncovered options and these will be less safe than the covered options due to the potential impacts associated with snow and ice in the storage area.
				• ***Support requirements.*** There will be additional support costs associated with each of the alternatives that include decentralized storage, as there will be additional management and logistical difficulties.
				• ***Training flexibility.*** The uncovered training locations will be less flexible than the covered areas and the centralized storage areas will be less flexible than the decentralized options.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal			Alternative Title	Detailed Alternative Description
				• ***Training realism, effectiveness.*** Training effectiveness in the covered areas will be vastly improved over the uncovered options.
		3	Centralized uncovered storage facility (MTO 3).	Under this alternative hands-on training will be conducted in a centralized uncovered oil storage area. Consequently, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: As discussed in the RCP Alternative, none of the four alternatives will have a significant difference in their impact on the following criteria. • ***Air Quality***, and • ***Noise.***
				Because this alternative will provide uncovered centralized storage it will provide a similar level of impact as the RCP Alternative on: • ***Fish & Wildlife***, and • ***T & E Species***.
				Additionally, because this alternative will have construction in only one location it will have a reduced impact on the following criteria when compared to the RCP Alternative: • ***Water Quality***, and • ***Wetlands.***
				Training and Operating Efficiency Criteria: When compared to the RCP Alternative this option will have a similar impact on: • ***Construction, operations and maintenance costs***. • ***Development costs***, and • ***Relative safety***.
				• ***Support requirements.*** There will be reduced support costs associated with this centralized storage alternative.
				• ***Training flexibility.*** The centralized storage area will be less flexible than the decentralized option.
				• ***Training realism, effectiveness.*** Training effectiveness in this uncovered area will be degraded when compared to the RCP Alternative.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
4	Decentralized covered storage facilities (MTO 4).	Under this alternative the hands-on training will be conducted in decentralized covered oil storage areas. By eliminating precipitation from this area the potential for water contaminated from oil entering surface or ground water systems will be reduced. Consequently, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: As discussed in the RCP Alternative, none of the four alternatives will have a significant difference in their impact on the following criteria. • ***Air Quality***, and • ***Noise.***
		Because this alternative will provide covered decentralized storage it will provide a reduced potential for impact when compared to the RCP Alternative on: • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands.***
		Training and Operating Efficiency Criteria: When compared to the RCP Alternative this option will have a similar impact on: • ***Development costs***, and • ***Support requirements.***
		• ***Construction, operations and maintenance costs.*** Will be higher for this option, as the cost of construction will include the cost of roof and wall systems.
		• ***Relative safety.*** Safety will be vastly improved in the covered area, as the impacts of snow and ice on storage operations will be eliminated.
		• ***Training flexibility.*** Training flexibility will be vastly improved in a covered storage area, as the impacts of weather will be eliminated.
		• ***Training realism, effectiveness.*** Training effectiveness in this covered area will be vastly improved over the uncovered option.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
5	Centralized covered storage facility (MTO 5).	Under this alternative the hands-on training will be conducted in a centralized covered oil storage area. By eliminating precipitation from the area used to store drums of fog oil, the potential for water contaminated with oil to enter surface or ground water systems will be greatly reduced.
		Consequently, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: As discussed in the RCP Alternative, none of the four alternatives will have a significant difference in their impact on the following criteria. • ***Air Quality***, and • ***Noise.***
		Because this alternative will provide covered centralized storage it will provide a similar level of impact as the RCP Alternative on: • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands.***
		Training and Operating Efficiency Criteria: When compared to the RCP Alternative this option will have a similar impact on: • ***Development costs***.
		• ***Construction, operations and maintenance costs.*** Will be higher for this option, as the cost of construction will include the cost of roof and wall systems.
		• ***Relative safety.*** Safety will be vastly improved in the covered area, as the impacts of snow and ice on storage operations will be eliminated.
		• ***Support requirements.*** Support requirements will be reduced in this centralized storage area.
		• ***Training flexibility.*** Training flexibility will be vastly improved in a covered storage area, as the impacts of weather will be eliminated.
		• ***Training realism, effectiveness.*** Training effectiveness in this covered area will be vastly improved over the uncovered option.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
8. RADIATION SAFETY (Training Activity Group No. 8)				
	8.1 Radiation Safety (Training Goal 8.1)			
		Alternatives		
			RCP Alternative from FMC to FLW .	Under this alternative, training will include the: • use of a general instruction classroom; • the use of equipment and radiological training aids in a specifically designed radiation lab which meets all regulations and is licensed by the NRC; and • the infrequent use small sealed radiological materials in outdoor training.
				Radiological Isotopes The radiation laboratories use small quantities of many isotopes. Most of these area equipment check sources or low activity laboratory sources. The most common isotopes and the highest activity used in training are the following: • approximately 250 microcuries of Americium 241, • approximately 10 millicuries of Calcium 45, • approximately 100 millicuries of Cobalt 60, • approximately 120 curies of Cesium 137, • approximately 10 millicuries of Gold 198, • approximately 1 curie of Hydrogen 3, • approximately 100 millicuries of Nickel 63, • approximately 15 microcuries of Plutonium 239, • approximately 200 millicuries of Strontium/Yttrium 90, and • approximately 25 microcuries of Uranium 233.
				In addition to these sources, several exempt quantities of Thorium 232 are used in the *CLOUD CHAMBER*. This is the same source used in high school science classes and is exempt from licensing.
				The majority of the radiation training takes place in the laboratories. Even though the school is licensed to operate an outside *alpha field* and one was built at FMC, the field was never used for training and there is no plan to use the *alpha field* in the future. Exterior training involving nuclear fallout and high radiation levels is accomplished through the use of the AN/TDQ-T1(V), which uses radio waves to simulate a radiation field.
				The AN/TDQ-T1(V) simulator is however ineffective in simulating the radiological effects of small, sealed radiological sources. Consequently Radiation Safety training includes the infrequent use of sealed radiological sources in exterior training environments.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
				These small (smaller than 0.002 microcurie), sealed radiological sources are used in exterior training areas an estimated six to eight times a year. This exterior training consists of placing a sealed radiological source in an exterior location. Students must then locate, identify, contain and decontaminate the radiological isotope source and the surrounding environment. The training is similar in nature to the hazardous material training required by the Occupational Health and Safety Organization of the Department of Transportation. This type of training replicates the need to find small sealed sources of radiation that may be released from:
				• damaged military equipment that contains radiological isotope sources (such as the moisture density gauges), • damaged civilian equipment (such as some types of household smoke detectors) that contain radiological isotope sources, and • released radiological isotopes from damaged civilian radiological sources, such as a damaged Radiological Lab in a hospital.
				Sealed radioactive isotopes currently used for this exterior type of training include: • Americium 241, 250 microcurie; • Cesium 137, 10 millicurie; and • Nickel 63, 10 millicurie.
				The radiological training associated with this training goal will require that the installation obtain and possess a NRC license. Given the differences between this and the other training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
				Environmental Criteria: Since small amounts of radiological isotopes are used in exterior environments as part of this training alternative, there is a very small potential for impacts to: • ***Air Quality,*** • ***Fish & Wildlife,*** • ***T & E Species,*** • ***Water Quality,*** and • ***Wetlands.***
				No unique impacts are anticipated with this alternative on ***Noise***.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal			Alternative Title	Detailed Alternative Description
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** No unique construction or operations and maintenance costs are anticipated with this alternative, when compared to MTO 6. Both of the methods will require the construction of a specifically designed and constructed Radiation Lab and radiation equipment storage areas.
				• ***Development costs.*** No unique development costs are anticipated.
				• ***Relative safety.*** Since small quantities of sealed radiological isotopes are used in this alternative, slightly greater risks due to inadvertent exposure will occur.
				• ***Support requirements.*** Since small quantities of sealed radiological isotopes are used in exterior environments in this alternative, support requirements will be greater due to control and handling issues.
				• ***Training flexibility.*** Training flexibility will be reduced due to the use of small quantities of sealed radiological isotopes.
				• ***Training realism, effectiveness***. Training realism will be similar under each of the other options.
		6	Simulation of Radiological Effects (MTO 6)	This alternative will be identical to the RCP Alternative except that it will require the development and fielding of a new simulation system similar to the AN/TDQ-T1(V) continuous wave radio transmitter, designed to simulate the effects of sealed source radiological materials in outdoor training. At the present time, the AN/TDQ-T1(V) is ineffective in simulating these small, sealed sources and no other simulator is in design or fabrication. Until a simulation system can be developed, training will continue using the RCP Alternative.
				The method will still require that the training facility receive and maintain a NRC for the use and storage of radiological materials. The annual cost of this license has been estimated at $12,000 per year.
				Given the differences between this alternative and the RCP Alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Environmental Criteria: Since small quantities of sealed radiological isotopes are not used in exterior environments in this alternative, there will be a slightly reduced potential for impacts to: • ***Air Quality,*** • ***Fish & Wildlife,*** • ***T & E Species,*** • ***Water Quality,*** and • ***Wetlands.***
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Both of these training options will require the construction of the same support facilities, consequently no unique construction or operations and maintenance costs are anticipated with this alternative.
		• ***Development costs.*** Implementation of this alternative will be anticipated to cost in excess of $1,000,000 to design, develop and field a device that will simulate the small quantities of sealed radiological isotope sources used to accomplish this type of training.
		• ***Relative safety.*** Since no radiological isotopes are used in exterior environments in this alternative, lower potential risks due to inadvertent exposure will occur.
		• ***Support requirements.*** Since no radiological isotopes are used in exterior environments in this alternative, support requirements concerned with control and handling will be less than in the RCP Alternative.
		• ***Training flexibility.*** Because training will not involve the use of radiological isotopes in an exterior training area, training flexibility will be improved.
		• ***Training realism, effectiveness.*** Training realism will be similar for both options.
8.2 Radiation, Test and Operational Equipment Storage (Training Goal 8.2)		
Alternatives		
	RCP Alternative from FMC to FLW.	Included in this training goal are requirements to store: • radiation test equipment, • operational equipment that uses radiological sources and • low level radiological waste generated in the training process.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Each of the storage options discussed below includes these three aspects. The differences in the alternative methods involves the method and location of the storage, but the total amount of area required for this goal will remain approximately equal in each option. Consequently, the relative cost for construction, operation and maintenance of the facilities will be similar for all options. Likewise, all of the facilities will be constructed to meet the same NRC requirements, resulting in a similar level of safety and impacts on biological resources.
		Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: No unique impacts are expected occur to: • ***Air Quality***, • ***Noise***, • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands.***
		Training and Operating Efficiency Criteria: No unique impacts are expected to occur on: • ***Construction, operations and maintenance costs***, • ***Development costs***, • ***Relative safety***, • ***Training flexibility***, and • ***Training realism, effectiveness***.
		• ***Support requirements.*** Support requirements for this alternative will be the lowest of the options. Frequently used items will be located near, or in, the classrooms in which they are used; while less frequently used items will be maintained in a centralized storage area. The amount of time required for instructors to locate and set up training equipment in their classes will be minimized.
1	Centralized storage (MTO 1).	Under this alternative all radiation test and operational equipment storage and the low level waste storage area will be located in a centralized storage facility. Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods:

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Environmental Criteria: No unique impacts are expected occur to: • ***Air Quality***, • ***Noise***, • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands.***
		Training and Operating Efficiency Criteria: No unique impacts are expected to occur on: • ***Construction, operations and maintenance costs***, • ***Development costs***, • ***Relative safety***, • ***Training flexibility***, and • ***Training realism, effectiveness.***
		• ***Support requirements.*** Support requirements for this method will be higher than for the RCP Alternative, but less than the decentralized storage alternative. All items will be stored in one location, requiring all instructors to return each piece to the storage area after each use. Items that will be required in the next class will also need to be returned, versus being stored near the classroom. This will increase administrative delays in moving the equipment.
2	Decentralized storage (MTO 2).	Under this alternative radiation test and operation equipment storage areas will be dispersed throughout the training areas. Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods:
		Environmental Criteria: No unique impacts are expected occur to: • ***Air Quality***, • ***Noise***, • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands.***

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			Alternative Title	Detailed Alternative Description
				Training and Operating Efficiency Criteria: No unique impacts are expected to occur on: • ***Construction, operations and maintenance costs***, • ***Development costs***, • ***Relative safety***, • ***Training flexibility***, and • ***Training realism, effectiveness.***
				• ***Support requirements.*** Support requirements for this training method will be the highest of all the options. All items will be stored in dispersed locations resulting in the potential that instructors will need to visit several storage sites to obtain the equipment that they will need for a class. Administrative effort in tracking the equipment, especially infrequently used items, will also be increased.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
9. RESEARCH SUPPORT (Training Activity Group No. 9)				
	9.1 Research Support (Training Goal 9.1)			
		Alternatives		
			RCP Alternative from FMC to FLW.	Under this alternative two additional libraries will be established in already developed areas to store and display the library collections of the Military Police School and Chemical School. Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: Due to the level of construction required and that construction will occur in areas already highly developed, this alternative will have less potential for impacts than MTO 2, but greater than MTO 3 and a potential similar to MTO 1 for impacts to the following resources: • ***Air Quality***, • ***Noise***, • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands.***
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction costs for this training method are expected to be approximately the same as MTO 1, lower than MTO 2 and higher than MTO 3 for this goal. The establishment of separate facilities will increase initial construction costs and require a larger staff to operate and maintain the facilities resulting in higher operations and maintenance costs. Construction of two individual libraries (approximately 8,500 square feet for the Chemical School and approximately 9,500 square feet for the Military Police School) will cost approximately $1,885,000 and will increase operations and maintenance costs by approximately $25,500 per year.
				• ***Development costs***. No unique development costs are expected to occur.
				• ***Relative safety.*** No differences in safety are anticipated among the alternatives.
				• ***Support requirements.*** Support requirements for this training method will be approximately the same as MTO 2 and higher than MTO 1 and MTO 3. Staff will be required at multiple sites in order to allow facilities to be open for access by students and other staff members.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal			Alternative Title	Detailed Alternative Description
				• ***Training flexibility***. Training flexibility for this training method will be approximately the same as MTO 2 and lower than MTO 1 and MTO 3.
				• ***Training realism, effectiveness.*** The effectiveness of this alternative is the same as the MTO 1 and MTO 2 alternatives, but lower than the MTO 3 alternative.
		1	Single location (MTO 1).	Under this alternative a dedicated joint-use library will be established for the storage and display of the Military Police School and Chemical School Library collections. Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: Due to the lower level of construction required, this alternative, along with the RCP Alternative, will have the least potential among the alternatives for impacts to the following resources: • ***Air Quality***, • ***Noise***, • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands.***
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction costs for this training method are anticipated to be approximately equal to the cost of constructing independent facilities (as discussed in the RCP Alternative) and will amount to approximately $1,885,000 for construction of the facilities and approximately $25,500 a year in additional maintenance and maintenance costs.
				• ***Support requirements.*** Support requirements for this training method will be lower than for the RCP and MTO 2 alternatives, but higher than for MTO 3. Staff members will be available to share common responsibilities which will allow for either an expansion of service hours or a reduction in staff and operating expenses.
				• ***Training flexibility.*** Flexibility for this training method will be higher than for the RCP and MTO 2 alternatives, but lower than for MTO 5.
				• ***Training realism, effectiveness.*** The effectiveness of this method will be the same for this alternative, the RCP and MTO 2 alternatives, but lower than MTO 3.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
		2	New locations (MTO 2).	Under this alternative additional libraries will be established at independent locations. Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: Due to the higher level of construction required and the construction of new facilities in new locations that might result in vegetative clearing and construction in previously undeveloped areas this alternative will have the highest potential among the alternatives for impacts to the following resources: • ***Air Quality***, • ***Noise***, • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands.***
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This alternative will have higher costs than all the other alternatives with respect to construction, operations and maintenance.
				• ***Support requirements.*** This alternative will have very similar impacts to the RCP Alternative, with higher requirements than MTO 1 and MTO 3 with respect to support requirements.
				• ***Training flexibility***. Training flexibility for this training method will be approximately the same as the RCP Alternative and less than MTO 1 and MTO 3.
				• ***Training realism, effectiveness.*** The effectiveness of this alternative is the same as the RCP and MTO 1 alternatives, but less than the MTO 3 alternative.
		3	Engineer School Library collection (MTO 3).	Under this alternative the library collections of the Military Police School and Chemical School will be housed in Clark Hall. The Engineer Center and FLW Community libraries are also located in Clark Hall. Interior renovation or the construction of an addition to Clark Hall will be included in the alternative, if required, to provide adequate space for these additional requirements.
				Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
				Environmental Criteria: Construction of an addition to Clark Hall will provide minimal potential additional impact. Due to the low level of renovation and construction required, this alternative will have the lowest potential among the alternatives for impacts to the following resources: • ***Air Quality***, • ***Noise***, • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands.***
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction costs for this method are anticipated to be the lowest of any of the options.
				• ***Support requirements.*** Support cost for this method will be lower than for any of the other alternatives since staff members will be available to share common responsibilities, thereby allowing for either an expansion of service hours or a reduction in staff and operating expenses.
				• ***Training flexibility.*** Training flexibility for this training method will be the highest among the alternatives.
				• ***Training realism, effectiveness.*** The effectiveness of this alternative will be the highest among the alternatives.
	9.2 Library, Specialized/Classified Information and Museum Artifacts (Training Goal 9.2)			
		Alternatives		
			RCP Alternative from FMC to FLW.	Under this alternative a dedicated storage location within the Chemical School Library will be provided for specialized and classified information and two additional museums will be established to store and display the collections of the Military Police Museum and Chemical Museum.
				Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Environmental Criteria: Due to the relative levels of construction required, this alternative will have a potential similar to MTO 1, less than MTO 3 and greater than MTO 4 and MTO 5 for impacts to the following resources: • ***Air Quality***, • ***Noise***, • ***Fish & Wildlife***, • ***T & E Species***, and • ***Water Quality***.
		• ***Wetlands.*** This alternative is expected to have a potential for impacts to wetlands similar to MTO 1, MTO 4 and MTO 5, but less potential for impacts than MTO 3.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction costs for this method, along with MTO 1 and MTO 3, are expected to be the highest for this goal. The establishment of separate facilities will increase initial construction costs and require a larger staff to operate and maintain the facilities resulting in higher operations and maintenance costs. Construction of two individual museums will cost approximately $8,400,000 with an additional approximately $150,000 required to provide the secure document storage area.
		• ***Development costs.*** No unique development costs are expected to occur.
		• ***Relative safety.*** No differences in safety are anticipated among the alternatives.
		• ***Support requirements.*** Support requirements for this method will be similar to MTO 1 and MTO 3, but higher than MTO 4 and MTO 5 for this option since staff will be required at multiple sites in order to allow facilities to be open for access by students and other staff members.
		• ***Training flexibility.*** Flexibility provided by this method will be similar to MTO 1 and MTO 3, but less than MTO 4 and MTO 5.
		• ***Training realism, effectiveness.*** The effectiveness of this method will be similar to MTO 1, MTO 3 and MTO 4, but less than MTO 5.
1	Joint location (MTO 1).	Under this alternative dedicated joint-use storage and display locations for the specialized and classified library collections and museum artifacts will be established Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Environmental Criteria: This alternative will have a potential similar to the RCP Alternative for impacts to the following resources: • ***Air Quality***, • ***Noise***, • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands.***
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction costs for this method are anticipated to be approximately equal to the cost of constructing independent facilities, as discussed in the RCP Alternative and will amount to approximately $8,400,000 for the museums and approximately $150,000 for the secure document storage area.
		• ***Support requirements.*** Support requirements for this method will be similar to the RCP Alternative.
		• ***Training flexibility.*** Flexibility offered by this alternative will be similar to the RCP Alternative.
		• ***Training realism, effectiveness.*** The effectiveness of this alternative will be similar to the RCP Alternative.
3	New locations (MTO 3).	Under this alternative additional storage areas for the specialized research information, classified library information and Museum collections will be established at independent locations.
		Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods:
		Environmental Criteria: Due to the higher level of construction required and the construction of new facilities in new locations that might result in vegetative clearing and construction in previously undeveloped areas this alternative will have the highest potential among the alternatives for impacts to the following resources: • ***Air Quality***, • ***Noise***, • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands.***

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal			Alternative Title	Detailed Alternative Description
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This alternative, along with the RCP and MTO 1 alternatives, will have the highest cost of the alternatives with respect to construction, operations and maintenance.
				• ***Support requirements.*** This alternative will have very similar impacts to the RCP and MTO 1 alternatives, with higher requirements than MTO 4 and MTO 5 with respect to support requirements.
				• ***Training flexibility.*** Training flexibility for this training method will be approximately the same as the RCP and MTO 1 alternatives and less than MTO 4 and MTO 5.
				• ***Training realism, effectiveness.*** The effectiveness of this alternative is the same as the RCP, MTO 1 and MTO 4 alternatives, but less than the MTO 5 alternative.
		4	Additions to Existing (MTO 4).	Under this alternative: • Museum artifacts will be stored and displayed at the existing Engineer Center Museum; and • specialized and classified information will be stored at Hoge Hall Additions to these buildings will be constructed to provide adequate area for the additional items, if required.
				Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: Construction of an addition to Hoge Hall will provide minimal potential additional impact. Due to the low level of renovation and construction required, this alternative, along with MTO 5, will have the lowest potential among the alternatives for impacts to the following resources: • ***Air Quality***, • ***Noise***, • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands.***

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction costs for this alternative, along with MTO 5, are anticipated to be lowest of any of the options for meeting this goal. This alternative will have an estimated construction cost of approximately $5,538,000 for the museum artifact display area, with an additional approximately $150,000 required to provide the secure document storage area. The cost of constructing the museum artifact area could be reduced to approximately $2,900,000 if only a storage area were constructed and displays could be collocated within the existing Engineer Center Museum.
		• ***Support requirements.*** Support requirements will be lowest of any of the alternatives since staff members will be available to share common responsibilities. This will allow for either an expansion of service hours or a reduction in staff and operating expenses.
		• ***Training flexibility.*** The training flexibility of this method will be greater than the RCP, MTO 1 and MTO 3, but less flexible than MTO 5.
		• ***Training realism, effectiveness.*** The effectiveness of this method will be similar to the RCP, MTO 1 and MTO 3 alternatives, but less than MTO 5.
5	Multiple displays (MTO 5).	Under this alternative, in addition to the items discussed in MTO 4: • Museum artifact display cases will be dispersed throughout other educational facilities.
		Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: Due to the low level of renovation and construction required, this alternative, along with MTO 4, will have the lowest potential among the alternatives for impacts to the following resources: • ***Air Quality***, • ***Noise***, • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands.***

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			Alternative Title	Detailed Alternative Description
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction costs for this alternative are anticipated to be similar to MTO 4, except the costs will be increased by approximately $250,000 to fund the additional display areas and display cases that will be combined into the classroom and support facilities used by students. This alternative will have an estimated construction cost of approximately $5,538,000 for the museum artifact display area, with an additional approximately $150,000 required to provide the secure document storage area. The cost of constructing the museum artifact area could be reduced to approximately $2,900,000 if only a storage area were constructed and displays could be collocated within the existing Engineer Center Museum.
				• ***Support requirements.*** Support requirements will be lower than for each of the alternatives except for MTO 4. Since staff members will be available to share common responsibilities. This will allow for either an expansion of service hours or a reduction in staff and operating expenses.
				• ***Training flexibility.*** The flexibility of this alternative is the highest of the alternatives since routine, scheduled changes of the material in the display cases could be coordinated to coincide with material being covered in training.
				• ***Training realism, effectiveness.*** Training effectiveness provided will be the greatest of the alternatives since students will be exposed to the historic artifacts and information on a more continuous basis.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
10. SMALL ARMS PROCEDURES (Training Activity Group No. 10)		
10.1 Weapons Training (Training Goal 10.1)		
Alternatives		
	RCP Alternative from FMC to FLW	Under this alternative students will be instructed in the use of individual and crew-served weapons with crew-served weapons being defined as those weapons that require more than one person to operate. Weapons that personnel will be trained on include: revolvers (0.38 caliber and 9 mm pistols); rifles (.308 caliber); AR15 (5.56 mm) assault rifle; AT4 anti-tank weapon; Mark 19 (40 mm) grenade machine gun; M2 (0.50 caliber) machine gun; (Colt) M4 sub-machine gun; M16 (5.56 mm) rifle (which is capable of firing semi-automatic or three-round bursts through the use of a selector switch) including the use of "match grade" ammunition for the M16A2 rifle; M24 Sniper Rifle and the Remmington 700 Sniper Rifle; M60 (7.62 mm) machine guns; M203 (40 mm) grenade launcher; M240 (7.62 mm) machine guns; M249 (5.56 mm linked) squad assault weapon (SAW); M250 (40 mm) grenade launcher; M1200 (12 gauge) shotgun which will be replaced in the near future by the Benelli M1 shotgun and the Remmington 870 shotgun; MP5K (9 mm) submachine gun; Fox vehicle machine gun; Uzi machine gun; and Crew-Served Weapons (which include those weapons that require more than one person to operate).
		This training will be accomplished through the use of: • classrooms, • the use of Fire Arms Training Simulators (FATS) and • live-fire of weapons on weapons familiarization and qualification ranges.
		Implementation of the RCP Alternative will differ from: • MTO 3 in that Option 3 will use a modified Mark 19 round that is less susceptible to ricochet, • MTO 4 in that Option 4 will eliminate the use of the simulators and replace this part of the training with additional live-fire range usage and • MTO 5 in that Option 5 will eliminate the use of modified Mark 19 rounds and use only high-explosive rounds.
		For training under the RCP Alternative: • U.S. Army students will use 6 high-explosive rounds and 24 modified training rounds and • U.S. Marine Corps students will use 24 high-explosive rounds.
		Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Environmental Criteria: There will be little to no difference between the training methods with respect to: • ***Air Quality,*** • ***Water Quality,*** and • ***Wetlands.***
		Use of the standard, high-explosive Mark 19 round will generate more **noise** and require a larger impact area/safety zone to help reduce the potential for inadvertent injury of personnel from ricocheting rounds. This larger impact area/safety zone will result in a slightly greater potential for impact on: • ***Fish & Wildlife***, and • ***T & E Species.***
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Use of the modified Mark 19 round will not have a meaningful impact on the level of construction required at the training area. The only differences in the range will be the size of the impact area/safety zone associated with the weapons range. Although the impact area/safety zone is larger, there will be no increase in the amount of construction or clearing required.
		• ***Development costs.*** The modified Mark 19 round has already been developed (to support other military requirements) and there is no difference in the method of instruction associated with the round.
		• ***Relative safety.*** The relative level of safety offered by this alternative will be slightly lower under this option as part of Mark 19 training will be conducted with standard high-explosive rounds. These rounds can ricochet off of the impact area, resulting in the need to establish a larger limited access safety zone during range use. However the level of safety for personnel involved in the training will not be notably changed.
		• ***Support requirements.*** This training method will cost approximately $384 per U.S. Army student and $96 per U.S. Marine Corps student.
		• ***Training flexibility.*** With the larger safety zone in place this training will be restricted to a fewer number of potential locations at FLW, reducing the amount of training flexibility in range locations and scheduling.
		• ***Training realism, effectiveness.*** Training realism for this alternative will be slightly less than for MTO 5.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
3	Modified Mark 19 Ammunition (MTO 3).	This alternative will be identical to the RCP Alternative, except that all Mark 19 training will use modified rounds. These rounds are specifically designed to reduce the potential and extent of ricochet that will be experienced. For training under this option: • U.S. Army students will use 30 modified training rounds and • U.S. Marine Corps students will use 24 modified training rounds.
		Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the RCP Alternative.
		Environmental Criteria: As discussed in the RCP Alternative analysis, there will be little to no difference between the methods with respect to: • ***Air Quality,*** • ***Water Quality,*** and • ***Wetlands.***
		The modified Mark 19 round will generate much less **noise** and will require a smaller impact area/ safety zone. This will result in a slightly lower potential for impact on: • ***Fish & Wildlife*** and • ***T & E Species.***
		Training and Operating Efficiency Criteria: As discussed in the RCP Alternative, there will be little difference between this MTO and the RCP Alternative with respect to: • ***Construction, operations and maintenance costs***, and • ***Development costs.***
		• ***Support requirements.*** This will use 30 modified rounds costing approximately $450 per U.S. Army student and 24 modified rounds costing $360 per Marine Corps student.
		• ***Training flexibility.*** With the smaller safety zone in place this training may be located at additional ranges, slightly increasing the number of ranges that are large enough to support this type of training.
		• ***Training realism, effectiveness.*** Effectiveness is significantly reduced through the use of the modified rounds.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
4	Lecture and firing range (MTO 4) .	Under this alternative students will be instructed in the use of individual and crew-served weapons through the use of: • classrooms, and • live-fire of weapons on weapons familiarization and qualification ranges. This training method will replace the current use of Fire Arms Training Simulators by doubling the amount of training on live-fire weapons ranges as currently specified.
		For training under this option: • U.S. Army students will use 12 high-explosive rounds and 48 modified training rounds and • U.S. Marine Corps students will use 48 high-explosive rounds. Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
		Environmental Criteria: There will be reduced potential for short-term impacts on each of the environmental criteria associated with the reduced level of construction. This short-term reduction will be off-set by the potential of long-term damage associated with increased live-fire usage.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction and operations costs will be lower for this alternative, as approximately **five** Fire Arms Training Simulators will not be required. Each of these simulators will require an area approximately 20 feet by 20 feet. Construction will be approximately $160,000 less and facilities operations and maintenance costs will be lowered by approximately $2,900 annually, if this alternative is selected.
		• ***Development costs.*** Implementation of this alternative will require the development of new POIs that remove the use of existing Fire Arms Training Simulators. This additional cost should be very minor.
		• ***Relative safety.*** There will be a reduced short-term potential for increased safety risk associated with construction activities. Training flexibility and effectiveness and safety will be decreased as students will not be faced by a realistic shoot/no-shoot decision. The training will also be less safe as students are exposed to additional live-fire rounds.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Support requirements.*** This training method will increase the cost of training each U.S. Army student to approximately $768 and the cost of training each U.S. Marine Corps student to approximately $192.
		• ***Training flexibility.*** Training flexibility will be decreased as students that require additional training will not be able to work through additional exercises without instructor support.
		• ***Training realism, effectiveness.*** Without the use of simulators, training realism and effectiveness will be decreased since students will not receive the very realistic shoot/no-shoot training that is provided by the simulators. Additionally, students that require additional qualification training will be required to obtain that training on the live-fire range which is more expensive, requires additional instructor support and does not allow for the instant feedback available in the simulators.
5	High-Explosive Mark 19 Ammunition (MTO 5).	This alternative will be identical to the RCP Alternative, except that all Mark 19 training will use high-explosive rounds. For training under this option: • U.S. Army students will use 30 high-explosive rounds and • U.S. Marine Corps students will use 24 high-explosive rounds.
		Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the RCP Alternative.
		Environmental Criteria: As discussed in the RCP Alternative analysis, there will be little to no difference between the methods with respect to: • ***Air Quality,*** • ***Water Quality,*** and • ***Wetlands.***
		The high-explosive Mark 19 round will generate more **noise** and will require a larger impact area/safety zone than the modified rounds. But the RCP Alternative includes the larger impact area, consequently this alternative will have the same impact as the RCP Alternative with respect to: • ***Fish & Wildlife***, and • ***T & E Species.***

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Training and Operating Efficiency Criteria: As discussed in the RCP Alternative, there will be little difference between this MTO and the RCP Alternative with respect to: • ***Construction, operations and maintenance costs***, and • ***Development costs.***
		• ***Relative safety.*** Training with only high-explosives will be slightly less safe than training with a combination of high-explosive and modified training rounds.
		• ***Support requirements.*** This will use 30 high-explosive rounds costing approximately $120 per U.S. Army student and 24 high-explosive rounds costing $96 per Marine Corps student.
		• ***Training flexibility.*** There will be a minor increase in training realism over the RCP Alternative and both of the methods will be significantly higher than the other modified training methods.
		• ***Training realism, effectiveness.*** Effectiveness is significantly improved through the use of the high-explosive rounds.
10.2 Weapons Training, Pistol (Training Goal 10.2)		
Alternatives		
	RCP from FMC to FLW.	Under this alternative students will be instructed in the use of weapons including the .22 Cal, .45 Cal, 9 mm and unique Marine Corps 9 mm Combat Pistol training requirements. This training will be accomplished through the use of: • classrooms, simulators and • live-fire of weapons on weapons familiarization and qualification ranges. The FATS allow students to gain and demonstrate skills during controlled day-time or night-time scenarios that stress weapons employment in a shoot/no shoot environment and stress the importance of accuracy once a shoot decision is made.
		Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
		Environmental Criteria: • ***Air Quality.*** There will be a greater potential for short-term air quality emissions associated with this alternative due to the greater amount of construction required.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Noise.*** There will be a greater potential for increased short-term noise levels associated with this alternative due to the greater amount of construction required. However the long-term anticipated noise level and duration generated as a result of this training alternative will be slightly less than that anticipated as a result of MTO 3. The use of simulators will reduce the amount of time that students will be required to spend on the ranges and the amount of ammunition that students will use developing weapons firing skills.
		• ***Fish & Wildlife.*** There will be a greater potential for short-term fish & wildlife impacts associated with this alternative due to the greater amount of construction required. Because this training method will replace some of the training conducted on live-fire weapons ranges (using lead-based ammunition) with the use of electronic simulators, the potential for impacts on biological resources and water quality will be decreased. The level of this reduced impact potential is in direct relation to the amount of ammunition that will not be used.
		• ***T & E Species.*** As discussed under fish & wildlife, there will be a greater potential for short-term T & E species impacts (associated with this alternative due to the greater amount of construction required) but reduced potential for long-term impacts (because this training method will replace some of the training conducted on live-fire weapons ranges (using lead-based ammunition) with the use of electronic simulators).
		• ***Water Quality.*** There will be a greater potential for short-term water quality impacts associated with this alternative due to the greater amount of construction required. Because this training method will replace some of the training conducted on live-fire weapons ranges (using lead-based ammunition) with the use of electronic simulators, the potential for impacts on biological resources and water quality will be decreased. The level of this reduced impact potential is in direct relation to the amount of ammunition that will not be used.
		• ***Wetlands.*** There will be a greater potential for short-term wetlands impacts associated with this alternative due to the greater amount of construction required.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction and operations costs will be higher for this alternative, as approximately 10 FATS will be required. Each of these simulators will require an area approximately 20 feet by 40 feet. The increased cost of construction associated with the simulators is approximately $640,000 while the extra operations and maintenance costs will be approximately $11,500 annually. The extra cost of maintaining these facilities will be partially off-set by the cost of the ammunition that will not be used.
		• ***Development costs.*** Development costs are anticipated to minimal for this alternative. The FATS are currently in use at FMC and can be relocated to FLW.
		• ***Relative safety.*** There will be a short-term potential for increased safety risk associated with construction activities. Implementation of this method will provide a safer training environment. Students will be trained in safer, more realistic shoot/no-shoot environments and training will not be impacted by inclement weather.
		• ***Support requirements.*** This training method will involve the use of computer simulation equipment, in addition to the equipment currently used. This increased equipment will require additional trained staff to use program and manage the use of the equipment.
		• ***Training flexibility.*** It will be easier for students requiring remedial or advanced training to work through additional exercises without instructor support.
		• ***Training realism, effectiveness.*** Training realism and effectiveness will be improved as instructors will be able to present multiple training scenarios to students in a shorter amount of time. The training scenarios may be more easily tailored to different environmental conditions allowing for training in multiple wartime and other-than-war operational environments. Training flexibility and effectiveness and safety will be improved through the use of simulators. Additionally, students will be trained in safer, more realistic shoot/no-shoot environments and training will not be impacted by inclement weather.
3	Lecture and firing range (MTO 3).	Under this alternative students will be instructed in the use of .45 Cal, 9 mm and Combat pistols through the use of: • classrooms, and • live-fire of weapons on weapons familiarization and qualification ranges.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		This training method will replace the current use of FATS with additional training on live-fire weapons ranges. Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method.
		Environmental Criteria: • ***Air Quality.*** There will be a reduced potential for short-term air quality emissions associated with this alternative due to the reduced amount of construction required.
		• ***Noise.*** There will be reduced noise levels in the short-term associated with this alternative due to the reduced amount of construction required. However, the anticipated long-term noise level generated as a result of this training alternative will be greater as students will be required to spend more time firing weapons on live-fire ranges.
		• ***Fish & Wildlife.*** There will be a reduced potential for short-term fish & wildlife impacts associated with this alternative due to the reduced amount of construction required. However, because this training method will increase the amount of training conducted on live-fire weapons ranges (using lead-based ammunition), the potential for impacts on biological resources and water quality will be increased. The level of this additional impact potential is in direct relation to the amount of additional ammunition used.
		• ***T & E Species.*** As discussed under fish & wildlife, there will be a reduced potential for short-term T & E species impacts (associated with this alternative due to the reduced amount of construction required) but increased potential for long-term impacts (because this training method will require an increase use of live-fire weapons ranges (using lead-based ammunition).
		• ***Water Quality.*** There will be a reduced potential for short-term water quality impacts associated with this alternative due to the reduced amount of construction required. Because this training method will increase the amount of training conducted on live-fire weapons ranges (using lead-based ammunition), the potential for impacts on biological resources and water quality will be increased. The level of this additional impact potential is in direct relation to the amount of additional ammunition used.
		• ***Wetlands.*** As discussed under Water Quality, there will be a reduced potential for short-term wetlands impacts (associated with this alternative due to the reduced amount of construction required) but increased potential for long-term impacts (because this training method will require an increase use of live-fire weapons ranges (using lead-based ammunition).

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction will be approximately $640,000 less and facilities operations and maintenance costs will be lowered by approximately $11,500 annually, if this alternative is selected.
				• ***Development costs.*** Implementation of this alternative will require the development of new POIs that remove the use of existing FATS. This additional cost should be very minor.
				• ***Relative safety.*** There will be a reduced short-term level of safety risk associated with this alternative as the amount of construction will be reduced. Long-term training safety will be decreased as students will not be faced by a realistic shoot/no-shoot training. The training will also be less safe as students are exposed to additional live-fire rounds.
				• ***Support requirements.*** This training method will eliminate a very minor need for additional administrative support to program and manage the use of the simulation equipment.
				• ***Training flexibility.*** Training flexibility will be decreased as students that require additional training will not be able to work through additional exercises without instructor support.
				• ***Training realism, effectiveness.*** Without the use of simulators, training realism and effectiveness will be decreased students will not receive the very realistic shoot/no-shoot training that is provided by the simulators. Additionally, students that require additional qualification training will be required to obtain that training on the live-fire range which is more expensive, requires additional instructor support and does not allow for the instant feedback available in the simulators.
	10.3		**Weapons Storage (Training Goal 10.3)**	
			RCP Alternative from FMC to FLW.	This alternative includes the use of a general instruction classroom followed by the use of mock facilities allowing students to gain and demonstrate skills in a controlled environment. Although other training methods were reviewed as part of the analysis, relocation of the current training practice was determined to be the only training method for completion of this training goal.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
11. VEHICLE OPERATIONS (Training Activity Group No. 11)		
11.1 Vehicle Operations, Driver Qualification (Training Goal 11.1)		
	RCP Alternative from FMC to FLW.	The alternative includes the use of general instruction classrooms to introduce students to military vehicle operations including the HMMWV, 2.5 and 5 ton trucks, coupe vehicles (pickup trucks), sedans, forklifts and semi-tractor trailers. This training is followed with driving practice in both tactical and non-tactical environments including: • established training areas; • on rock and asphaltic concrete paved driving areas in training areas; and • on the installation roadway system.
		Depending upon the type of vehicle and the level of training being obtained, this training uses specifically designed obstacles that allow students to experience and utilize the tactical capabilities of the vehicles. These facilities include water pits, mud pits, sand pits, logs across the roadway, boulders and rocks in the roadway and specifically designed turning and backing areas designed to test the skills of the operator and to demonstrate some of the capabilities of the vehicles.
		At FMC this training is completed on a specifically designed driving course which consists of approximately 22,000 square yards of asphaltic concrete pavement, with concrete and wood obstacles. Students first complete training on basic vehicle operations and then, after they have demonstrated that they are able to operate the equipment in a non-tactical environment, they learn how to operate in a tactical environment.
		Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods:
		Environmental Criteria: • ***Air Quality.*** Air quality will be more adversely impacted under this training method (and MTO 2) than it will be under MTO 4. The potential for long-term air quality emissions will be similar to the other alternative involving vehicle operation (MTO 2). There will be less potential for short-term air quality emissions associated with this alternative due to the lower amount of construction required.
		• ***Noise.*** There will be less potential for short-term noise impacts associated with this alternative due to the lower level of construction required. The potential for long-term noise increases will be similar to MTO 2, but greater than MTO 4.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			Alternative Title	Detailed Alternative Description
				• ***Fish & Wildlife.*** There will be less potential for short-term fish and wildlife impacts levels associated with this alternative due to the lower level of construction required. The potential for long-term fish & wildlife habitat deterioration or improvement will be similar to MTO 2, but greater than MTO 4.
				• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required. The potential for long-term T & E species habitat degradation or improvement will be similar to MTO 2.
				• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required. The potential for long-term water quality impacts will be similar to MTO 2, but greater than MTO 4.
				• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required. The potential for long-term wetlands deterioration or enhancement will be similar to MTO 2, but greater than MTO 4.
				Training and Operating Efficiency: • ***Construction, operations and maintenance costs.*** Construction and operations cost are expected to be slightly higher than for MTO 2. An estimated three 50-person classrooms will be required. This will increase initial construction costs by approximately $660,000 and operations and maintenance costs by approximately $10,000 per year.
				• ***Development costs.*** This method (and MTO 2) will not require the development of the simulators making the development cost for these options lower.
				• ***Relative safety.*** The relative safety and training effectiveness of this alternative may be slightly higher than for MTO 2, but lower than the relative safety and training effectiveness of MTO 4.
				• ***Support requirements.*** The will be no additional development costs, as this classroom is already constructed and in use. This training method will not involve the use of computer simulation equipment (as called for in MTO 4) in addition to the equipment currently used. Therefore this method will not require the addition of trained staff to program and manage the use of the equipment.
				• ***Training flexibility.*** The potential training flexibility offered through the use of simulators (as offered by MTO 4) will not be available under this training method. Consequently this training option will offer less training flexibility than MTO 4.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Training realism, effectiveness.*** The current system is limited in its control of apparent driving conditions. This will result in a less realistic training environment than could be achieved with a simulator.
2	Field training (MTO 2).	Under this alternative training at exterior driving areas will remain unchanged; however, classroom training to introduce students to the training goal will be conducted at the training area versus in a classroom. Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods:
		Environmental Criteria: • ***Air Quality.*** Air quality will be more adversely impacted under this training method (and the RCP Alternative) than it will be under MTO 4, due to the operation of the approximately 1,300 vehicles that will be relocated to FLW.
		• ***Noise.*** There will be less potential for short-term noise impacts associated with this alternative due to the smaller amount of construction required. The potential for long-term noise increases will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***Fish & Wildlife.*** There will be less potential for short-term fish and wildlife impacts associated with this alternative due to the smaller amount of construction required. The potential for long-term fish & wildlife habitat deterioration or improvement will be similar to the other alternatives as this training method consists primarily of introductory in-place instruction.
		• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required. The potential for long-term T & E species habitat degradation or improvement will be similar to the other alternatives as this training method consists primarily of introductory in-place instruction.
		• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required. The potential for long-term water quality impacts will be similar to the other alternatives as this training method consists primarily of introductory in-place instruction.
		• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required. The potential for long-term wetlands deterioration or enhancement will be similar to the other alternatives as this training method consists primarily of introductory in-place instruction.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		Training and Operating Efficiency: • ***Construction, operations and maintenance costs.*** Construction and operations cost are expected to be slightly lower than for the RCP Alternative. An estimated three 50-person classrooms will not be required. This will reduce initial construction costs by approximately $660,000 and operations and maintenance costs by approximately $10,000 per year.
		• ***Development costs.*** This method (and the RCP Alternative) will not require the development of the simulators, making the development cost for these options lower.
		• ***Relative safety.*** The relative safety of this alternative may be slightly less than either the RCP Alternative or MTO 4 as students may not retain as much of the introductory information that is provided prior to vehicle operations.
		• ***Support requirements.*** This training method will not involve the use of computer simulation equipment (as called for in MTO 4) in addition to the equipment currently used. Therefore this method will not require the addition of trained staff to program and manage the use of the equipment.
		• ***Training flexibility.*** The potential training flexibility offered through the use of simulators (as offered by MTO 4) will not be available under this training method. Consequently this training option will offer less training flexibility than MTO 4.
		• ***Training effectiveness.*** The training effectiveness of this alternative may be slightly less than either the RCP Alternative or MTO 4 as students may not retain as much of the introductory information that is provided prior to vehicle operations.
4	Augmented Computer simulation (MTO 3).	Under this training alternative, Driver Qualification training offered in the RCP Alternative will be expanded through the development and use of a computer driving simulators. Use of simulators will allow students to experience some aspects of actual vehicle operations in a controlled environment. Use of the simulator will augment actual driver vehicle operation during tactical and non-tactical conditions.
		Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods:
		Environmental Criteria: • ***Air Quality.*** In the long term, air quality will not be as adversely impacted under this training method as it will under the RCP Alternative or MTO 2, since the number of hours spent operating vehicles could be reduced. There will be a greater potential for short-term air quality effects associated with this alternative due to the greater amount of construction required.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Noise.*** There will be a greater potential for increased short-term noise levels associated with this alternative due to the greater amount of construction required.
		• ***Fish & Wildlife.*** There will be a greater potential for short-term fish and wildlife impacts associated with this alternative due to the greater amount of construction required.
		• ***T & E Species.*** There will be a greater potential for short-term T & E species impacts associated with this alternative due to the greater amount of construction required.
		• ***Water Quality.*** There will be a greater potential for short-term water quality impacts associated with this alternative due to the greater amount of construction required.
		• ***Wetlands.*** There will be a greater potential for short-term wetlands impacts associated with this alternative due to the greater amount of construction required.
		Training and Operating Efficiency: • ***Construction, operations and maintenance costs.*** It is estimated that this alternative will require the construction of a minimum of two additional 4,000-square-foot simulation classrooms. These classrooms will include computer driven driver training simulators that could be used to provide an initial introduction to tactical vehicle operations. Construction of these classrooms will cost approximately $1,650,000 and will increase operations and maintenance costs associated with the classrooms by approximately $13,700 annually.
		• ***Development costs.*** Development of the simulators will increase the initial cost of this alternative.
		• ***Relative safety*** and ***Training effectiveness.*** The relative safety and training effectiveness of this alternative may be slightly higher than for the RCP Alternative or MTO 2.
		• ***Training flexibility.*** Training flexibility will be increased as students that required additional basic instruction could obtain this training through the use of the simulator without requiring staff personnel or other students to remain at the training area.
11.2	**Evasive Driving (Training Goal 11.2)**	
	RCP Alternative from FMC to FLW.	This alternative includes the use of a general instruction classroom followed by: • use of a paved, controlled driver training area (to provide driving practice without endangering other vehicle's occupants on the installation's roadway system), and • use of a paved area specifically designed and constructed to facilitate training on skids and slides.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		At FMC the training area includes a two-lane wide and approximately 1.2 mile long driving course, with a 75-foot by 75-foot driving skid pad. Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method:
		Environmental Criteria: • ***Air Quality.*** There will be a greater potential for short-term air quality emissions associated with this alternative due to the greater amount of construction required.
		• ***Noise.*** There will be a greater potential for increased short-term noise levels associated with this alternative due to the greater amount of construction required.
		• ***Fish & Wildlife.*** There will be a greater potential for short-term fish and wildlife impacts associated with this alternative due to the greater amount of construction required.
		• ***T & E Species.*** There will be a greater potential for short-term T & E species impacts associated with this alternative due to the greater amount of construction required.
		• ***Water Quality.*** There will be a greater potential for short-term water quality impacts associated with this alternative due to the greater amount of construction required.
		• ***Wetlands.*** There will be a greater potential for short-term wetlands impacts associated with this alternative due to the greater amount of construction required.
		Training and Operating Efficiency: • ***Construction, operations and maintenance costs.*** Construction costs are anticipated to be slightly higher than for Modified Training Alternative 3, since one 50-person classroom with approximately 1,500 square feet will be required. This will increase initial construction costs by approximately $220,000 and increase annual maintenance costs by approximately $3,300 per year.
		• ***Development costs.*** There will not be additional development costs, under the RCP Alternative. However, MTO 3 will require development of new Programs of Instruction.
		• ***Relative safety.*** Safety will be increased as students will be more likely to comprehend information presented in a formal classroom than they will from only exterior training as proposed under MTO 3.
		• ***Support requirements.*** The will be no additional costs as compared to the other training method.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
				• ***Training flexibility***. Training flexibility will be increased with classroom instruction since inclement weather will not have a considerable impact on training.
				• ***Training Effectiveness***. Training effectiveness will be increased with classroom instruction since inclement weather will not have a considerable impact on training.
		3	Field training (MTO 3).	Under this alternative students will be trained in Evasive Driving on a driving course with skid pad. Students will not be provided classroom instruction, eliminating the need for a classroom as discussed in the RCP Alternative.
				Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training method:
				Environmental Criteria: The lower level of construction under this alternative will result in a lower potential for impacts to: • ***Air Quality***, • ***Noise***, • ***Fish & Wildlife***, • ***T & E Species***, • ***Water Quality***, and • ***Wetlands.***
				Training and Operating Efficiency: • ***Construction, operations and maintenance costs.*** Initial construction costs are anticipated to be slightly lower for Modified Training Alternative 3, than for the RCP Alternative, since one 50-person classroom with approximately 1,500 square feet will not be required. Based on elimination of the requirement for a classroom, initial construction costs will be reduced by approximately $220,000 and annual maintenance costs will be reduced by approximately $3,300 per year.
				• ***Development costs***. Development costs will occur due to a need to rewrite Programs of Instruction to accommodate the elimination of classroom instruction.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
	11.3		**Vehicle Maintenance Training (Training Goal 11.3)**	
			RCP Alternative from FMC to FLW.	Under this alternative students are provided an introduction to the vehicle maintenance, in a classroom. Following this introduction students: • are introduced to a piece of equipment, • are instructed and shown how to perform required *pre-start* and *operator level* maintenance (such as checking the oil and other fluids) and • demonstrate how to perform required *pre-start* and *operator level* maintenance.
				This training involves actual hands-on training with equipment providing students the opportunity to see the equipment, locate required gauges and fluid check points and to perform maintenance as required such as adding oil, hydraulic fluid, or air. This training will be associated with the approximately 1,300 pieces of equipment that will be relocated from FMC to FLW.
				Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: • ***Air Quality.*** There will be less potential for short-term air quality emissions associated with this alternative due to the lower level of construction required when compared to MTO 3. A similar level of impacts will be anticipated from Modified Training Options 2 and 4 and both of these options will have a greater impact than MTO 3.
				• ***Noise.*** There will be less potential for short-term noise impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term noise increases will be similar to the other alternatives as this training method consists primarily of classroom instruction.
				• ***Fish & Wildlife.*** There will be less potential for short-term fish and wildlife impacts levels associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term fish and wildlife habitat deterioration or improvement will be similar to the other alternatives as this training method consists primarily of classroom instruction.
				• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term T & E species habitat degradation or improvement will be similar to the other alternatives as this training method consists primarily of classroom instruction.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term water quality impacts will be slightly higher for this alternative than for the Modified RCP Alternative.
		• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term wetlands deterioration for this alternative will be slightly higher for this alternative than the Modified RCP Alternative.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This alternative will use existing, available maintenance and classroom facilities for instruction on vehicle maintenance and system maintenance. Consequently no additional construction will be required to support this training goal.
		• ***Development costs.*** This training method will not require the development of new training methods or simulators.
		• ***Relative safety.*** Since this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced when compared to MTO 3. Long-term safety will remain relatively similar to Modified Training Options 3 and 4, as all of these options will consist of primarily classroom instruction.
		• ***Support requirements.*** The will be no additional support costs associated with this training method.
		• ***Training flexibility.*** Without a simulator, as called for in MTO 3, it will be more difficult for students requiring remedial or advanced training to work through additional exercises without instructor support, making this training method less flexible than MTO 3. In a simulator an instructor will be more able to challenge students by changing the level of fluids of the readings that will be provided.
		• ***Training realism, effectiveness.*** The performance of maintenance on real pieces of equipment provides the highest degree of realism possible, but is limited by the amount of support required to set up equipment that needs maintenance. A similar level of impact will be anticipated from the RCP Alternative. Specific pieces of operational equipment will be used as training aids, allowing for the most effective and efficient use of training time.

Table IV.2: Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening				
Training Goal			**Alternative Title**	**Detailed Alternative Description**
		2	Field training (MTO 2).	Under this alternative vehicle maintenance training will be conducted in a field environment, use maintenance bays and be conducted at vehicle parking areas. Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods.
				Environmental Criteria: • ***Air Quality.*** A similar level of impacts will be anticipated from the RCP Alternative and both of these options will have a greater impact than MTO 3.
				• ***Noise.*** There will be less potential for short-term noise impacts associated with this alternative due to the lower level of construction required. The potential for long-term noise increases will be similar to the RCP and MTO 4 alternatives, but greater than MTO 3 since that training will not involve vehicle operation.
				• ***Fish & Wildlife.*** There will be less potential for short-term fish and wildlife impacts levels associated with this alternative due to the lower level of construction required. The potential for long-term fish and wildlife habitat deterioration or improvement will be similar to the RCP and MTO 4 alternatives, but greater than MTO 3 since that training will not involve vehicle operation.
				• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required. The potential for long-term T & E species habitat degradation or improvement will be similar to the RCP and MTO 4 alternatives, but greater than MTO 3 since that training will not involve vehicle operation.
				• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required. The potential for long-term water quality impacts will be similar to the RCP and MTO 4 alternatives, but greater than MTO 3 since that training will not involve vehicle operation.
				• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required. The potential for long-term wetlands deterioration or enhancement will be similar to the RCP and MTO 4 alternatives, but greater than MTO 3 since that training will not involve vehicle operation.
				Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs*** and ***Development costs.*** Construction, operations, maintenance and development costs for this alternative will be less than for the Simulated Maintenance (MTO 3). A similar level of impact will be anticipated from the RCP Alternative.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal			Alternative Title	Detailed Alternative Description
				• ***Relative safety.*** Safety for this alternative will be slightly less than for the Simulated Maintenance (MTO 3). A similar level of impact will be anticipated from the RCP Alternative.
				• ***Support requirements.*** The will be no additional development costs, as this classroom is already constructed and in use.
				• ***Training flexibility.*** Without a simulator, as called for in MTO 3, it will be more difficult for students requiring remedial or advanced training to work through additional exercises without instructor support, making this training method less flexible than MTO 3. In a simulator an instructor will be more able to challenge students by changing the level of fluids of the readings that will be provided.
				• ***Training realism, effectiveness.*** The performance of maintenance on real pieces of equipment provides the highest degree of realism possible, but is limited by the amount of support required to set up equipment that needs maintenance. A similar level of impact will be anticipated from the RCP Alternative. Specific pieces of operational equipment will be used as training aids, allowing for the most effective and efficient use of training time.
		3	Simulated Maintenance (MTO 3).	Under this alternative a maintenance simulator will be developed that will allow students to perform maintenance in a controlled environment and on each anticipated piece of equipment. The simulators will include moving parts and include simulated hydraulic and motor fluids and operational and test equipment. The equipment will be connected to a control panel that will allow the instructor to control the readings that students obtain, in order to test students in both routine maintenance and trouble shooting.
				Given the differences in this training alternative, it is anticipated that this alternative will have the following impacts relative to the other training methods:
				Environmental Criteria: • ***Air Quality.*** There will be an increased potential for short-term air quality emissions associated with this alternative due to the higher level of construction required. The potential for long-term air quality impacts from training accomplished is less under this training method than under the RCP Alternative or the training methods proposed as part of Modified Training Options 2 and 4, because vehicles and equipment will not be operated as part of training.
				• ***Noise.*** There will be an increased potential for short-term noise impacts associated with this alternative due to the higher level of construction required. The potential for long-term noise increases will be similar to the other alternatives as this training method consists primarily of classroom instruction.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Fish & Wildlife.*** There will be an increased potential for short-term fish and wildlife impacts levels associated with this alternative due to the higher level of construction required. The potential for long-term fish and wildlife habitat deterioration or improvement will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***T & E Species.*** There will be an increased potential for short-term T & E species impacts associated with this alternative due to the higher level of construction required. The potential for long-term T & E species habitat degradation or improvement will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***Water Quality.*** There will be an increased potential for short-term water quality impacts associated with this alternative due to the higher level of construction required.
		• ***Wetlands.*** There will be an increased potential for short-term wetlands impacts associated with this alternative due to the higher level of construction required.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** Construction costs are expected to be much higher (than the RCP or Modified Training Options 2 and 4) based on the large number of simulators that will be required. A simulator will be required for each of the 50 vehicle types that are expected to be relocated to FLW. Additional training area will be required to house the simulators. For the purpose of this analysis it has been assumed that ten 50-person training areas with approximately 2,000 square feet each will be needed for these additional simulators. This will increase the initial construction cost by approximately $4,125,000 and annual maintenance costs will be increased by approximately $40,500 per year.
		• ***Development costs.*** Development costs are expected to be much higher (than the RCP or Modified Training Options 2 and 4) based on the need to develop and build an estimated 10 simulators in order to provide training for most of the 50 vehicle types that will be relocated to FLW.
		• ***Relative safety.*** Safety will be improved (when compared to the RCP or Modified Training Options 2 and 4) as students will not be required to maintain actual equipment and safety precautions will be included in the simulators that will reduce the potential for students being injured.
		• ***Support requirements.*** This training method will not involve the use of computer simulation equipment (as called for in MTO 3) in addition to the equipment currently used. Therefore this method will not require the addition of trained staff to program and manage the use of the equipment.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***Training flexibility.*** Training flexibility will be reduced (when compared to the RCP and Modified Training Options 2 and 4) because as new pieces of equipment are added to the inventory, new simulators will also be needed.
		• ***Training realism, effectiveness.*** Training realism will be lower than the RCP or Modified Training Options 2 and 4 alternatives that include maintenance on actual pieces of equipment.
4	Modified Current Practice (MTO 4).	This alternative involves: • classroom instruction, followed by • use of a limited number of the internal components in the classroom to demonstrate general operator maintenance procedures such as how to perform required *pre-start* and *operator level* maintenance (such as checking the oil and other fluids) and • demonstrations of operator maintenance in an area designed to control surface water runoff, followed by • hands-on maintenance at a maintenance bay (as required) to illustrate more detailed operator maintenance procedures.
		This training involves actual hands-on training with equipment providing students the opportunity to see the equipment, locate required gauges and fluid check points and to perform maintenance as required such as adding oil, hydraulic fluid, or air. This training will be associated with the approximately 1,300 pieces of equipment that will be relocated from FMC to FLW. This option varies from the RCP Alternative in that the use of vehicles for training in exterior training areas will be limited to areas that have controlled stormwater collection to prevent the inadvertent runoff of contaminated stormwater.
		Given the differences between this and the other training alternatives, it is anticipated that this alternative will have the following impacts relative to the other training methods.
		Environmental Criteria: • ***Air Quality.*** There will be less potential for short-term air quality emissions associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term air quality emissions will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***Fish & Wildlife.*** There will be less potential for short-term fish & wildlife impacts levels associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term fish & wildlife habitat deterioration or improvement will be similar to the other alternatives as this training method consists primarily of classroom instruction.

Table IV.2:
Detailed Descriptions of Training Methods that Passed the Initial Screening - Environmentally Preferred and Optimum Training Methods Screening

Training Goal	Alternative Title	Detailed Alternative Description
		• ***T & E Species.*** There will be less potential for short-term T & E species impacts associated with this alternative due to the lower level of construction required when compared to MTO 3.
		The potential for long-term T & E species habitat degradation or improvement will be similar to the other alternatives as this training method consists primarily of classroom instruction.
		• ***Water Quality.*** There will be less potential for short-term water quality impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term water quality impacts will be less for this alternative than for the Modified Training Options 2 and 3 alternatives
		• ***Wetlands.*** There will be less potential for short-term wetlands impacts associated with this alternative due to the lower level of construction required when compared to MTO 3. The potential for long-term wetlands deterioration for this alternative will be slightly less for this alternative than the MTO 3 alternatives.
		Training and Operating Efficiency Criteria: • ***Construction, operations and maintenance costs.*** This alternative will use existing, available maintenance and classroom facilities for instruction on vehicle equipment and system maintenance. Consequently no additional construction will be required to support this training goal.
		• ***Development costs.*** This training method will not require the development of new training methods or simulators.
		• ***Relative safety.*** As this option will reduce the amount of construction required, the short-term potential for safety concerns during construction will be reduced when compared to MTO 3. Long-term safety will remain relatively similar for the RCP Alternative and MTO 3, as all the options will consist of primarily classroom instruction.
		• ***Support requirements.*** The will be no additional support costs associated with this training method.
		• ***Training flexibility.*** Without a simulator, as called for in MTO 3, it will be more difficult for students requiring remedial or advanced training to work through additional exercises without instructor support. Making this training method less flexible than MTO 3.
		• ***Training realism, effectiveness.*** The performance of maintenance on real pieces of equipment provides the highest degree of realism possible, but is limited by the amount of support required to setup equipment that needs maintenance. In a simulator an instructor will be more able to challenge students by changing the level of fluids of the readings that will be provided.

Source: Harland Bartholomew & Associates, Inc.

As outlined in Table IV.1, several of the training goals identified only have one associated implementation method. However, many of the training goals have several potential training methods based on application of the initial screening criteria. More detailed descriptions of these training methods were provided in Table IV.2. Based on these more detailed descriptions, an Environmentally Preferred Training Method (EPTM) and an Optimum Training Method (OPTM) will be selected for each training goal. The secondary screening to select the EPTM and OPTM for each training goal is located in subsection IV.7 below.

IV.7 SECONDARY SCREENING TO SELECT ENVIRONMENTALLY PREFERRED AND OPTIMUM TRAINING METHODS

Following development of the detailed descriptions for the training goals which could be accomplished by several potential training methods (which are located in Table IV.2 above), the viable training methods were then subjected to a more rigorous screening process to determine the environmentally preferred training method (EPTM) and optimum training method (OPTM) for each training goal. The secondary evaluation criteria and corresponding impact "indicators" were sorted into two broad groups: 1) Environmental Criteria; and 2) Training and Operating Efficiency Criteria. These criteria, which were summarized in subsection IV.6 (Table IV.2), included:

IV.7.1 Environmental Criteria

1. **Air Quality**
2. **Noise**
3. **Fish and Wildlife Species and Habitat**
4. **Federal Threatened and Endangered Species**
5. **Water Quality**
6. **Wetlands**

IV.7.2 Training and Operating Efficiency Criteria

1. **Construction and Operations and Maintenance Costs**
2. **Development Cost**
3. **Safety**
4. **Support Requirements**
5. **Training Flexibility**
6. **Training Realism and Effectiveness**

IV.7.3 Selection of Environmentally Preferred and Optimum Training Methods

Selection of the training methods which will be evaluated for environmental impacts in Section 5, Environmental Consequences was performed by a team of personnel from the following organizations:

- Military Police School;
- Chemical School;
- Engineer School;
- USAEC & FLW, BRAC Transition Office;
- Harland Bartholomew & Associates, Inc.;
- Parsons Engineering Science, Inc.; and
- 3/D Environmental, Inc.

These organizations were chosen to assist in the selection based on their unique experience and expertise.

- Military Police School and Chemical School representatives were selected because they understand the unique training requirements of the students enrolled in their POIs and they are responsible for ensuring that training standards are achieved by these students.

- Engineer School and the USAEC & FLW, BRAC Transition Office representatives were selected because of their ability to integrate training requirements of the students enrolled in classes at the Military Police School and the Chemical School and their understanding of the potential synergistic effects of collocating the three schools at FLW.

- Harland Bartholomew & Associates, Inc. representatives were selected based upon their understanding knowledge of:
  - Military master planning;
  - Environmental analysis requirements;
  - Human health issues;
  - Land use at FLW and in the surrounding community;
  - Intergovernmental cooperation and joint planning; and
  - Socioeconomic resources including population; housing; community facilities and services (on- and off-post) and economy.

- Parsons Engineering Science, Inc. representatives were selected based upon their understanding of the existing environmental conditions at FLW and their knowledge of:
  - Physical environmental resources, including topography, physiography and climate; geology and seismicity; soils; air quality; noise; and visual aesthetics:
  - Water resources including hydrogeology; surface water; and floodplains:
  - Biological Resources, including fish and wildlife; vegetation; wetlands; and state natural area designation:
  - Environmental Restoration and compliance, including hazardous waste management; polychlorinated biphenyls; asbestos; pest management; munitions; and radioactive waste:
  - Cultural resources including archaeological sites; historic buildings, structures and sites; and cemeteries:
  - Infrastructure, including utilities and transportation systems:

- 3/D Environmental, Inc. representatives were selected based on their extensive knowledge and understanding of biological resources including threatened and endangered species.

Each training goal was scored independently of the other training goals to determine the EPTM and OPTM for that training goal. The EPTM and OPTM for reaching each training goal were determined using a points-scored checklist. The points-scored checklist was designed to insure that all important evaluation criteria were considered in a consistent manner, that the evaluation was accurately and fully documented and that each training method was evaluated for each applicable environmental criterion and training and operating efficiency criterion by all personnel from each review entity. Using a standardized evaluation form (similar to Table IV.3 below), each team member rated the potential, relative impact of each training method using an unweighted numerical point system. These ratings were based on information in the detailed alternative descriptions provided in Table IV.2 (above). The points assigned by team members to each training method for each environmental criterion and training and operating criterion were compiled, discussed and a consensus among the raters was reached. Table IV.3 provides the final, unweighted numerical scores assigned to each training method.

The training method which received the highest total score for the six environmental criteria within a training goal was selected as the EPTM. In 42 of the 44 training methods evaluated, the OPTM represents the training method that received the highest total relative score for the six environmental, and the six training and operating criteria. The two training methods which form the exceptions include: TG 7.2 Obscurant, Employment Operations Basic (Static) and TG 7.4 Obscurant, Employment Operations (Field Training Exercises).

- Implementation of the training method which received the highest total score for TG 7.2 would require that static training be conducted using a water manifold on the pulse-jet style generators and a fog oil recycling manifold on the turbine style generators. Both of these manifolds are newly fielded and long-term maintenance data on the items is not available. Although technically possible, questions as to the long-term reliability of these newly fielded manifolds, and difficulties in training in winter precluded its selection as the OPTM. Nevertheless the use of these manifolds in static training has been evaluated for environmental impacts, in Section 5 of the EIS, as the Environmentally Preferred Training Method (EPTM). Once the manifolds have been fielded, and maintenance data is available, the Army will review the potential of implementing their use in static training.

- Implementation of the training method which received the highest total score for TG 7.4 would require a reduction in fog oil use for this training method from the current practice which uses up to 64,000 gallons per year to 28,500 gallons per year. This reduced fog oil usage would require the use of computer simulation systems. Although such systems could be developed and the alternative is technically possible, existing simulation systems are not capable of adequately replicating obscurant employment principles in a field environment. Therefore, although this method was evaluated for environmental impacts, in Section 5 of the EIS, as the EPTM the Army was unable to select this method for the OPTM. If simulation equipment is developed in the future, which can adequately replicate obscurant employment principles in a field environment, the Army will review the potential for implementing their use in field training.

It is important to note that the RCP Alternative, OPTM Alternative and EPTM Alternative are not mutually exclusive; in fact, they are often the same.

Table IV.3 was used to select the training methods that will be evaluated for environmental impacts. The EIS preparers determined the RCP Alternative, OPTM Alternative and EPTM Alternatives provided an appropriate range of alternatives for analysis. Together these three alternatives provide a choice of alternatives that define the range of reasonable alternatives with respect to anticipated environmental impact. The RCP Alternative is generally the least environmentally preferred, while the EPTM Alternative is by definition the most environmentally preferred. The OPTM Alternative falls within the anticipated range of environmental impacts that may be anticipated between the RCP Alternative and the EPTM Alternative. Analysis of the potential environmental impacts of the three alternatives can be found in Volume I, Section 5, Environmental Consequences of this EIS.

Table IV.3:

Selection of Optimum Training Methods (OPTM) and Environmentally Preferred Training Methods (EPTM)

		Environmental Criteria							Training and Operating Efficiency Criteria							Summary			
	Viable/Non-Viable	Air Quality	Noise	Fish & Wildlife	T & E Species	Water Quality	Wetlands	Environmental Subtotal	Construction Costs	Development Costs	Relative Safety	Support Requirements	Training Flexibility	Training Realism, Effectiveness	Training & Ops. Subtotal	Total Points	Relocate Current Practice	Optimum Training Method	Environmentally Preferred Training Method
1. BATTLEFIELD PROCEDURES																			
1.1 Call-For Fire Support																			
Relocate Current Practice	Yes	5	5	5	5	5	5	30	5	5	5	5	2	3	25	55	●	●	●
1 Lecture only	No																		
2 Field maneuver training	No																		
3 Computer Simulation	Yes	4	4	4	4	4	4	24	3	3	4	4	5	5	24	48			
1.2 Maneuver Operations																			
Relocate Current Practice	Yes																●	●	●
1 Lecture only	No																		
2 Field maneuver training	No																		
3 Computer Simulation	No																		
1.3 Mines and Obstacles																			
Relocate Current Practice	Yes	2	4	1	1	1	1	10	3	5	4	3	4	4	23	33	●		
1 Lecture only	No																		
2 Field maneuver training	No																		
3 Applied Instruction Classroom	No																		
4 Inert mines and obstacles	No																		
5 Reduced Charge	Yes	4	5	2	2	2	2	17	3	4	5	4	4	5	25	42			
6 Controlled Area	Yes	2	4	4	4	4	4	22	2	5	4	3	4	4	22	44			
7 Reduced Charge & Controlled Area	Yes	4	5	5	5	5	5	29	2	4	5	4	4	5	24	53		●	●
8 Live FFE deterrents & mines/indoors	No																		
9 Computer simulation	No																		

Table IV.3:

Selection of Optimum Training Methods (OPTM) and Environmentally Preferred Training Methods (EPTM)

		Environmental Criteria							Training and Operating Efficiency Criteria							Summary			
	Viable/Non-Viable	Air Quality	Noise	Fish & Wildlife	T & E Species	Water Quality	Wetlands	Environmental Subtotal	Construction Costs	Development Costs	Relative Safety	Support Requirements	Training Flexibility	Training Realism, Effectiveness	Training & Ops. Subtotal	Total Points	Relocate Current Practice	Optimum Training Method	Environmentally Preferred Training Method
1.4 NBC Warning and Reporting																			
Relocate Current Practice	Yes																•	•	•
1 Lecture only	No																		
2 Field maneuver training	No																		
1.5 Night-Time Squad Engagement																			
Relocate Current Practice	Yes																•	•	•
1 Lecture only	No																		
2 Field maneuver training	No																		
3 Firing Range, only	No																		
4 Lecture followed by FATS	No																		
1.6 Unarmed Self-Defense																			
Relocate Current Practice	Yes																•	•	•
1 Lecture only	No																		
2 Field maneuver training	No																		
1.7 Urban Terrain																			
Relocate Current Practice	Yes																•	•	•
1 Lecture only	No																		
2 Dedicated field/maneuver area	No																		
3 Designated facility, only	No																		
1.8 Warfighting and Tactical Operations																			
Relocate Current Practice	Yes																•	•	•
1 Lecture only	No																		
2 Dedicated field/maneuver area	No																		
3 Designated facility, only	No																		

Table IV.3:

Selection of Optimum Training Methods (OPTM) and Environmentally Preferred Training Methods (EPTM)

		Environmental Criteria							Training and Operating Efficiency Criteria							Summary			
	Viable/Non-Viable	Air Quality	Noise	Fish & Wildlife	T & E Species	Water Quality	Wetlands	Environmental Subtotal	Construction Costs	Development Costs	Relative Safety	Support Requirements	Training Flexibility	Training Realism, Effectiveness	Training & Ops. Subtotal	Total Points	Relocate Current Practice	Optimum Training Method	Environmentally Preferred Training Method
2. BIOLOGICAL AGENT DETECTION																			
2.1 BIDS Employment and Operations																			
Relocate Current Practice	Yes	4	4	4	4	4	4	24	3	5	4	5	5	5	27	51	●	●	●
1 Lecture only	No																		
2 Field/maneuver area	No																		
3 Lecture & field/maneuver	Yes	3	3	3	3	3	3	18	5	5	3	1	2	3	19	37			
4 Simulator	No																		
2.2 BIDS Maintenance																			
Relocate Current Practice	Yes	5	5	4	4	4	4	26	3	5	4	5	5	5	27	53	●		
1 Lecture only	No																		
2 Maintenance bay	Yes	4	4	4	4	4	4	24	3	5	4	5	5	3	25	49			
3 Simulated Maintenance	Yes	5	5	5	5	5	5	30	1	1	3	5	5	4	19	49			
4 Modified RCP	Yes	5	5	5	5	5	5	30	3	5	4	5	5	5	27	57		●	●
2.3 LR-BSDS Battlefield Employment																			
Relocate Current Practice	Yes																●	●	●
1 Lecture only	No																		
2 Field/maneuver area, only (no lecture or simulators)	No																		
3 Lecture & field/maneuver area (no simulators)	No																		
4 Simulator	No																		

Table IV.3:

Selection of Optimum Training Methods (OPTM) and Environmentally Preferred Training Methods (EPTM)

		Environmental Criteria							Training and Operating Efficiency Criteria							Summary			
	Viable/Non-Viable	Air Quality	Noise	Fish & Wildlife	T & E Species	Water Quality	Wetlands	Environmental Subtotal	Construction Costs	Development Costs	Relative Safety	Support Requirements	Training Flexibility	Training Realism, Effectiveness	Training & Ops. Subtotal	Total Points	Relocate Current Practice	Optimum Training Method	Environmentally Preferred Training Method
2.4 LR-BSDS Maintenance																			
Relocate Current Practice	Yes	5	5	5	5	5	5	30	3	5	4	5	5	5	27	57	●	●	●
1 Lecture only	No																		
2 Maintenance bay	Yes	4	4	4	4	4	4	24	3	5	4	5	5	3	25	49			
3 Simulated Maintenance	Yes	5	5	5	5	5	5	30	1	1	3	5	5	4	19	49			
3. NBC RECONNAISSANCE OPERATIONS																			
3.1 FOX Battlefield Employment and Operation																			
Relocate Current Practice	Yes	4	4	4	4	4	4	24	3	5	5	5	5	5	28	52	●	●	●
1 Lecture only	No																		
2 Field/maneuver area, only (no lecture or simulators)	No																		
3 Lecture & field/maneuver	Yes	3	3	3	3	3	3	18	5	5	3	1	2	3	19	37			
4 Simulator	No																		
3.2 FOX Maintenance																			
Relocate Current Practice	Yes	5	5	4	4	4	4	26	3	5	5	5	5	5	28	54	●		
1 Lecture only	No																		
2 Maintenance bay	Yes	4	4	4	4	4	4	24	3	5	4	5	5	3	25	49			
3 Simulated Maintenance	Yes	5	5	5	5	5	5	30	1	1	4	5	5	4	20	50			
4 Modified RCP	Yes	5	5	5	5	5	5	30	3	5	5	5	5	5	28	58		●	●

Table IV.3:

Selection of Optimum Training Methods (OPTM) and Environmentally Preferred Training Methods (EPTM)

		Environmental Criteria							Training and Operating Efficiency Criteria							Summary			
	Viable/Non-Viable	Air Quality	Noise	Fish & Wildlife	T & E Species	Water Quality	Wetlands	Environmental Subtotal	Construction Costs	Development Costs	Relative Safety	Support Requirements	Training Flexibility	Training Realism, Effectiveness	Training & Ops. Subtotal	Total Points	Relocate Current Practice	Optimum Training Method	Environmentally Preferred Training Method
4. GENERAL MILITARY TRAINING																			
4.1 General Military Training																			
Relocate Current Practice	Yes																●	●	●
1 Lecture only	No																		
2 Field/maneuver area, only (no lecture or simulators)	No																		
4.2 GMT, Field Training																			
Relocate Current Practice	Yes																●	●	●
1 Lecture only	No																		
2 Field/maneuver area	No																		
3 Computer simulation	No																		
4.3 GMT, NBC Personal Protective Equipment																			
Relocate Current Practice	Yes	4	4	4	4	4	4	24	4	5	4	5	5	5	28	52	●	●	
1 Field training without CS (Tear) Gas	No																		
2 Lecture, only	No																		
3 Field/maneuver (no lecture)	Yes	5	5	5	5	5	5	30	5	4	2	5	1	2	19	49			●
4.4 Signals & Other Non-verbal Communications																			
Relocate Current Practice	Yes	4	4	4	4	4	4	24	4	5	4	5	5	5	28	52	●	●	
1 Lecture, only	No																		
2 Field/maneuver	Yes	5	5	5	5	5	5	30	5	4	2	5	1	1	18	48			●

Table IV.3:

Selection of Optimum Training Methods (OPTM) and Environmentally Preferred Training Methods (EPTM)

		Environmental Criteria							Training and Operating Efficiency Criteria							Summary			
	Viable/Non-Viable	Air Quality	Noise	Fish & Wildlife	T & E Species	Water Quality	Wetlands	Environmental Subtotal	Construction Costs	Development Costs	Relative Safety	Support Requirements	Training Flexibility	Training Realism, Effectiveness	Training & Ops. Subtotal	Total Points	Relocate Current Practice	Optimum Training Method	Environmentally Preferred Training Method
4.5 Radio Communications including secure communications																			
Relocate Current Practice	Yes	4	4	4	4	4	4	24	4	5	4	5	5	5	28	52	●	●	
1 Lecture, only	No																		
2 Field/maneuver	Yes	5	5	5	5	5	5	30	5	4	2	5	1	1	18	48			●
4.6 Computer Operations																			
Relocate Current Practice	Yes	5	5	5	5	5	5	30	3	5	5	5	3	3	24	54	●		
1 Lecture, only	No																		
2 Computer Lab	Yes	4	4	4	4	4	4	24	5	5	5	5	1	1	22	46			
3 Computer Network	Yes	5	5	5	5	5	5	30	1	4	5	5	5	5	25	55		●	●
4.7 Physical Fitness and Total Fitness																			
Relocate Current Practice	Yes																●	●	●
1 Lecture only	No																		
2 Field/maneuver area	No																		
5. MILITARY POLICE OPERATIONS																			
5.1 Basic MP Functions																			
Relocate Current Practice	Yes																●	●	●
1 Lecture only	No																		
2 Field training	No																		
3 Mock response and investigation	No																		

Table IV.3:

Selection of Optimum Training Methods (OPTM) and Environmentally Preferred Training Methods (EPTM)

	Viable/Non-Viable	Environmental Criteria							Training and Operating Efficiency Criteria							Summary			
		Air Quality	Noise	Fish & Wildlife	T & E Species	Water Quality	Wetlands	Environmental Subtotal	Construction Costs	Development Costs	Relative Safety	Support Requirements	Training Flexibility	Training Realism, Effectiveness	Training & Ops. Subtotal	Total Points	Relocate Current Practice	Optimum Training Method	Environmentally Preferred Training Method
5.2 Advanced Law Enforcement																			
Relocate Current Practice	Yes																●	●	●
1 Lecture only	No																		
2 Field training	No																		
3 Mock response and investigation	No																		
6. NBC PROCEDURES																			
6.1 NBC Procedures																			
Relocate Current Practice	Yes	4	4	3	3	3	3	20	3	5	3	3	1	5	20	40	●		
1 Lecture only	No																		
2 Field/maneuver training	No																		
3 Training at Active Airfield	No																		
4 Simulation of Radiological Effects	Yes	4	4	4	4	4	4	24	3	5	4	5	5	5	27	51		●	●
6.2 NBC Equipment																			
Relocate Current Practice	Yes																●	●	●
1 Lecture only	No																		
2 Field/maneuver training	No																		

Table IV.3:

Selection of Optimum Training Methods (OPTM) and Environmentally Preferred Training Methods (EPTM)

		Environmental Criteria							Training and Operating Efficiency Criteria							Summary			
	Viable/Non-Viable	Air Quality	Noise	Fish & Wildlife	T & E Species	Water Quality	Wetlands	Environmental Subtotal	Construction Costs	Development Costs	Relative Safety	Support Requirements	Training Flexibility	Training Realism, Effectiveness	Training & Ops. Subtotal	Total Points	Relocate Current Practice	Optimum Training Method	Environmentally Preferred Training Method
6.3 NBC Decon Advanced (Toxic Agent)																			
Relocate Current Practice	Yes	1	5	5	5	5	5	26	1	4	5	4	5	5	24	50	●		
1 Lecture only	No																		
2 Toxic-agent training, only (no lecture)	No																		
3 Testing without a toxic-agent	No																		
4 Testing with a simulated toxic-agent	No																		
5 Exterior Training Area																			
6 Toxic Agent Training with Off-Site Waste Disposal	Yes	5	5	5	5	5	5	30	5	5	5	5	5	5	30	60		●	●
6.4 NBC Survival Recovery																			
Relocate Current Practice	Yes	4	4	3	3	3	3	20	3	5	3	3	1	5	20	40	●		
1 Lecture only	No																		
2 Field/maneuver training	No																		
3 Simulation of Radiological Effects	Yes	4	4	4	4	4	4	24	3	5	4	5	5	5	27	51		●	●
7. OBSCURANT PROCEDURES																			
7.1 Obscurant, Employment Principles																			
Relocate Current Practice	Yes																●	●	●
1 Lecture only	No																		
2 Field/maneuver training	No																		

Table IV.3:

Selection of Optimum Training Methods (OPTM) and Environmentally Preferred Training Methods (EPTM)

		Environmental Criteria							Training and Operating Efficiency Criteria							Summary			
	Viable/Non-Viable	Air Quality	Noise	Fish & Wildlife	T & E Species	Water Quality	Wetlands	Environmental Subtotal	Construction Costs	Development Costs	Relative Safety	Support Requirements	Training Flexibility	Training Realism, Effectiveness	Training & Ops. Subtotal	Total Points	Relocate Current Practice	Optimum Training Method	Environmentally Preferred Training Method
7.2 Obscurant, Employment Operations Basic (Static)																			
Relocate Current Practice (approx. 20,000 gallons/year)	Yes	2	2	2	2	2	2	12	3	5	3	2	3	4	20	32	●		
1 Lecture only	No																		
2 Field training	No																		
3 Water as fog source	No																		
4 Vegetable oil as fog source	No																		
5 Reduced Training Time & Modified Management (approx. 8,500 gallons/year)	Yes	3	3	3	3	3	3	18	4	5	4	3	4	4	24	42		●	
6 Reduced Time & Simulator (approx. 5,950 gallons/year)	Yes	4	4	4	4	4	4	24	4	2	4	4	5	4	23	47			
7 Water/Recycling Manifold (approx. 1,000 gallons/year)	Yes	5	5	3	5	5	5	28	4	5	5	5	5	5	29	57			●
8 Indoor Training	No																		
9 Computer Simulation	No																		

Table IV.3:

Selection of Optimum Training Methods (OPTM) and Environmentally Preferred Training Methods (EPTM)

	Viable/Non-Viable	Environmental Criteria							Training and Operating Efficiency Criteria							Summary			
		Air Quality	Noise	Fish & Wildlife	T & E Species	Water Quality	Wetlands	Environmental Subtotal	Construction Costs	Development Costs	Relative Safety	Support Requirements	Training Flexibility	Training Realism, Effectiveness	Training & Ops. Subtotal	Total Points	Relocate Current Practice	Optimum Training Method	Environmentally Preferred Training Method
7.3 Obscurant, Employment Operations (Mobile)																			
Relocate Current Practice (approx. 41,500 gallons/year)	Yes	3	3	3	3	3	3	18	4	5	4	3	5	5	26	44	●		
1 Lecture only	No																		
2 Field training	No																		
3 Water as fog source	No																		
4 Vegetable oil as fog source	No																		
5 Reduced Fog-Oil (approx. 20,000 gallons/year)	Yes	4	4	4	4	4	4	24	4	5	5	5	4	4	27	51		●	●
6 Field/maneuver training	No																		

Table IV.3:

Selection of Optimum Training Methods (OPTM) and Environmentally Preferred Training Methods (EPTM)

		Environmental Criteria							Training and Operating Efficiency Criteria							Summary			
	Viable/Non-Viable	Air Quality	Noise	Fish & Wildlife	T & E Species	Water Quality	Wetlands	Environmental Subtotal	Construction Costs	Development Costs	Relative Safety	Support Requirements	Training Flexibility	Training Realism, Effectiveness	Training & Ops. Subtotal	Total Points	Relocate Current Practice	Optimum Training Method	Environmentally Preferred Training Method
7.4 Obscurant, Employment Operations (Field Training Exercises)																			
Relocate Current Practice (approx. 64,000 gallons/year)	Yes	2	2	2	2	2	2	12	5	5	1	2	5	5	23	35	●		
1 Reduced Fog-Oil (approx. 56,000 gallons/year)	Yes	3	3	3	3	3	3	18	5	5	2	3	5	4	24	42		●	
2 Reduced Fog-Oil (approx. 44,000 gallons/year)	Yes	4	4	4	4	4	4	24	5	5	3	4	3	3	23	47			
3 Reduced Fog-Oil (approx. 28,500 gallons/year)	Yes	5	5	5	5	5	5	30	3	1	5	5	2	2	18	48			●
4 Lecture only	No																		
5 Field training	No																		
6 Water as fog source	No																		
7 Vegetable oil as fog source	No																		
8 Computer simulation	No																		
7.5 Obscurant, Generator Maintenance																			
Relocate Current Practice	Yes	5	5	4	4	4	4	26	3	4	5	5	5	5	27	53	●		
1 Lecture only	No																		
2 Field training	No																		
3 Simulated Maintenance	Yes	5	5	5	5	5	5	30	2	1	4	4	3	3	17	47			
4 Modified RCP	Yes	5	5	5	5	5	5	30	3	5	5	5	5	4	27	57		●	●

Table IV.3:

Selection of Optimum Training Methods (OPTM) and Environmentally Preferred Training Methods (EPTM)

		Environmental Criteria							Training and Operating Efficiency Criteria							Summary			
	Viable/Non-Viable	Air Quality	Noise	Fish & Wildlife	T & E Species	Water Quality	Wetlands	Environmental Subtotal	Construction Costs	Development Costs	Relative Safety	Support Requirements	Training Flexibility	Training Realism, Effectiveness	Training & Ops. Subtotal	Total Points	Relocate Current Practice	Optimum Training Method	Environmentally Preferred Training Method
7.6 Obscurant, Storage Operations																			
Relocate Current Practice	Yes	5	5	3	3	2	2	20	5	5	3	4	3	3	23	43	●		
1 Lecture only	No																		
2 Oil Storage yard	No																		
3 Centralized Uncovered	Yes	5	5	3	3	3	3	22	5	5	3	5	2	2	22	44			
4 Decentralized Covered	Yes	5	5	4	4	4	4	26	3	5	5	5	5	5	28	54		●	
5 Centralized Covered	Yes	5	5	4	4	5	4	27	4	5	4	4	3	5	25	52			●
8. RADIATION SAFETY																			
8.1 Radiation Safety																			
Relocate Current Practice	Yes	4	5	4	4	4	4	25	3	5	3	3	1	5	20	45	●		
1 Lecture only	No																		
2 Lab training	No																		
3 General Leonard Wood Army Community Hospital Lab	No																		
4 Designated lab	No																		
5 Computer simulation	No																		
6 Simulated Radiological Effects	Yes	5	5	5	5	5	5	30	3	5	4	5	5	5	27	57		●	●
8.2 Radiation, Test and Operations Equipment Storage																			
Relocate Current Practice	Yes	4	4	4	4	4	4	24	5	5	5	5	5	5	30	54	●	●	●
1 Centralized Storage	Yes	4	4	4	4	4	4	24	5	5	4	4	5	5	28	52			
2 Decentralized Storage	Yes	4	4	4	4	4	4	24	5	5	4	3	5	5	27	51			

Table IV.3:

Selection of Optimum Training Methods (OPTM) and Environmentally Preferred Training Methods (EPTM)

		Environmental Criteria							Training and Operating Efficiency Criteria							Summary			
	Viable/Non-Viable	Air Quality	Noise	Fish & Wildlife	T & E Species	Water Quality	Wetlands	Environmental Subtotal	Construction Costs	Development Costs	Relative Safety	Support Requirements	Training Flexibility	Training Realism, Effectiveness	Training & Ops. Subtotal	Total Points	Relocate Current Practice	Optimum Training Method	Environmentally Preferred Training Method
9. RESEARCH SUPPORT																			
9.1 Research support																			
Relocate Current Practice	Yes	4	4	4	4	4	4	24	2	5	5	2	3	4	21	45	●		
1 Single Location	Yes	4	4	4	4	4	4	24	2	5	5	3	4	4	23	47			
2 New Locations	Yes	3	3	3	3	3	3	18	1	5	5	2	3	4	20	38			
3 Engineer School Library	Yes	5	5	5	5	5	5	30	5	5	5	5	5	5	30	60		●	●
9.2 Specialized/Classified and Museum																			
Relocate Current Practice	Yes	4	4	4	4	4	5	25	1	5	5	1	2	3	17	42	●		
1 Joint Location	Yes	4	4	4	4	4	5	25	1	5	5	1	2	3	17	42			
2 Existing areas	No																		
3 New Locations	Yes	3	3	3	3	3	4	19	1	5	5	1	2	3	17	36			
4 Additions to Existing	Yes	5	5	5	5	5	5	30	4	5	5	5	3	3	25	55			
5 Multiple Displays	Yes	5	5	5	5	5	5	30	4	5	5	4	5	5	28	58		●	●
10. SMALL ARMS PROCEDURES																			
10.1 Weapons Training																			
Relocate Current Practice	Yes	4	4	3	3	3	3	20	4	5	5	4	3	4	25	45	●	●	
1 Lecture, only	No																		
2 Firing Range	No																		
3 Simulated MK-19 Rounds (only)	Yes	4	4	4	4	3	3	22	5	4	4	3	5	1	22	44			●
4 No Fire Arms Training Simulators	Yes	4	2	2	2	1	1	12	5	5	3	1	1	2	17	29			
5 High-Explosive MK-19 Rounds (only)	Yes	4	4	3	3	2	2	18	3	5	5	3	3	5	24	42			
6 Computer simulator	No																		

Table IV.3:

Selection of Optimum Training Methods (OPTM) and Environmentally Preferred Training Methods (EPTM)

		Environmental Criteria							Training and Operating Efficiency Criteria							Summary			
	Viable/Non-Viable	Air Quality	Noise	Fish & Wildlife	T & E Species	Water Quality	Wetlands	Environmental Subtotal	Construction Costs	Development Costs	Relative Safety	Support Requirements	Training Flexibility	Training Realism, Effectiveness	Training & Ops. Subtotal	Total Points	Relocate Current Practice	Optimum Training Method	Environmentally Preferred Training Method
10.2 Weapons Training, Pistol																			
Relocate Current Practice	Yes	4	4	4	4	4	4	24	3	5	5	5	5	5	28	52	●	●	●
1 Lecture, only	No																		
2 Firing Range	No																		
3 Lecture & Range	Yes	3	1	4	4	3	3	18	5	5	3	3	1	1	18	36			
4 Lecture and FATS, no range	No																		
10.3 Weapons Storage																			
Relocate Current Practice	Yes																●	●	●
1 Lecture, only	No																		
2 Firing Range	No																		
11. VEHICLE OPERATIONS																			
11.1 Vehicle Operations, Driver Qualification																			
Relocate Current Practice	Yes	3	4	4	4	4	4	23	4	5	3	5	3	3	23	46	●		
1 Lecture, only	No																		
2 Field Training	Yes	3	4	4	4	4	4	23	5	5	2	5	2	3	22	45			
3 Computer simulator, only	No																		
4 Computer simulator, to augment training/reduce hours in vehicles	Yes	5	5	5	5	5	5	30	3	3	5	4	5	5	25	55		●	●
11.2 Evasive Driving																			
Relocate Current Practice	Yes	4	4	4	4	4	4	24	4	5	5	5	5	5	29	53	●	●	
1 Lecture, only	No																		
2 Classroom and simulators	No																		
3 Field Training	Yes	5	5	5	5	5	5	30	5	5	4	4	3	3	24	54			●

Table IV.3:

Selection of Optimum Training Methods (OPTM) and Environmentally Preferred Training Methods (EPTM)

		Environmental Criteria							Training and Operating Efficiency Criteria							Summary			
	Viable/Non-Viable	Air Quality	Noise	Fish & Wildlife	T & E Species	Water Quality	Wetlands	Environmental Subtotal	Construction Costs	Development Costs	Relative Safety	Support Requirements	Training Flexibility	Training Realism, Effectiveness	Training & Ops. Subtotal	Total Points	Relocate Current Practice	Optimum Training Method	Environmentally Preferred Training Method
11.3 Vehicle Maintenance																			
Relocate Current Practice	Yes	5	5	4	4	4	4	26	3	5	5	5	5	4	27	53	●		
1 Lecture, only	No																		
2 Maintenance bay	Yes	4	4	4	4	4	4	24	3	5	5	5	5	3	26	50			
3 Simulated Maintenance	Yes	5	5	5	5	5	5	30	1	1	4	3	5	5	19	49			
4 Modified RCP	Yes	5	5	5	5	5	5	30	3	5	5	5	5	4	27	57		●	●

IV.7.4 Preferred Location (On-Post versus Off-Post) Screening. The final step in the training alternatives formulation and screening process involved consideration of on-post versus off-post locations for the proposed training activities. The potential to lease off-post buildings to accommodate BRAC-related facility requirements is discussed in Volume III, Appendix C, *Identification and Screening of Supporting Facility Alternatives* of the EIS. As stated in EIS subsection 1.2.2.1, the 1990 Base Closure Act precludes the need to consider use of any other military installation to accommodate the actions to be relocated to FLW. Furthermore, the intent of the BRAC process is to consolidate military training activities at fewer sites, reduce DOD land holdings, and reduce associated operations and maintenance costs. These factors tend to limit the feasibility of considering off-post land areas. However, the EIS study team did consider the potential to use non-DOD lands outside of FLW boundaries for certain activities. Specifically, consideration of off-post sites was limited to those training activities that are influenced by either of the following on-post versus off-post location factors:

- **On-Post vs. Off-Post Location Factor No. 1:** Training goals that require extensive roadway travel or field training in distant areas; and/or

- **On-Post vs. Off-Post Location Factor No. 2:** Training goals that require extensive land areas, and that have a high "perceived" potential (based on information obtained through the EIS scoping process) to cause significant adverse impacts on known sensitive environmental or cultural resources within the existing boundaries of FLW.

- **Definition of "On-Post" Lands.** For the purpose of this analysis, it was understood that Department of Army holdings at FLW currently consist of the following:

Type of Holding	**Acres**	
Fee	53,225	
Lease and Easements	14	
National Forest Land Areas	9,672	"Coordinated Use"
Total	62,911	

The 9,672 acres of Mark Twain National Forest land is located within the installation boundaries along the northwestern edge of the installation. These lands are used by FLW for military training according to FLW Regulation 210-14 Ranges and Training Areas (FLW, 1993a) and through coordinated with the Rolla-Houston Ranger District of the Mark Twain National Forest.

Consideration of On-Post versus Off-Post Location Factor No. 1: Training Goals That Require Extensive Roadway Travel or Training at Distant Areas. Based on a review of each of the training goals presented in Table IV.2, relative to Location Factor No. 1, it was concluded that eight of the goals could utilize off-post areas. Activities associated with these goals are described in Table IV.2 and are listed below:

- Goal 1.2 Maneuver Operations;
- Goal 1.3 Mines and Obstacles to Movement;
- Goal 1.4 Nuclear, Biological and Chemical Warning and Reporting Systems;
- Goal 1.8 Warfighting and Tactical Operations;
- Goal 4.2 General Military Training, Field Training;
- Goal 4.4 Signals and Other Non-Verbal Forms of Communications;
- Goal 4.5 Radio Communications, including secure communications; and
- Goal 11.1 Vehicle Operations, Driver Qualification.

These training goals include the use of vehicle convoys, tactical or non-tactical foot marches, or field training exercises that require large land areas. Furthermore, activities associated with these training goals are directly comparable to those currently conducted at FLW.

Relocation of the Military Police School and Chemical School to the installation will result in a minor increase in these activities. It is anticipated that no additional land areas will be required to conduct these activities. Because the FLW land base is sufficient to accommodate these training activities, "off-post" training alternatives were not developed.

Consideration of On-Post Versus Off-Post Location Factor No. 2: Training Goals That Require Extensive Land Areas, and That Have a High "Perceived" Potential to Cause Significant Adverse Impacts on Known Sensitive Environmental or Cultural Resources Within the Existing Boundaries of FLW. Review of the training goals, as presented in Table IV.2 of Volume IV, relative to Location Factor No. 2 concluded that only two of the goals involve activities that meet this on-post versus off-post location factor. These goals are:

- Goal 7.3 Obscurant (Smoke) Employment Proficiency Test (Mobile Operations); and
- Goal 7.4 Obscurant (Smoke) Employment Proficiency Test (Field Training Exercises).

These two training goals require the use of relatively large land areas. Based on comments received through the public scoping process, concerns have been raised regarding the potential for this activity to have adverse impacts on natural resources within FLW boundaries. These concerns include the potential to impact Federally-listed threatened and endangered species, fish and wildlife populations, water quality, human health and other factors. Given these concerns, the EIS study team considered the potential to use land areas outside of the installation boundaries to perform these smoke training activities.

Based on this analysis, it was determined that it is not feasible to conduct smoke training outside of the installation boundaries. Therefore, "off-post" alternatives to this activity were not developed. Factors that contributed to this decision include:

- **Inadequate Off-Post Land Area.** These training activities require extensive land areas to ensure proficiency in the deployment and maintenance of smoke cover over large land areas similar to the way that smoke is used in offensive or defensive combat situations. In addition, several large smoke training ranges are required to provide adequate flexibility to conduct training operations under different weather conditions and prevailing wind directions. It was assumed that off-post smoke training would have to be conducted within a 60-mile radius of the installation to provide time to travel to and from the site, and to conduct a mission in a single day. In consideration of land use and roadway patterns within this 60-mile radius of FLW, it was determined that no land areas are readily available to support this type of training activity without having considerable impact on the civilian community.

- **Safety.** Adequate land areas exist within FLW boundaries to conduct large-scale smoke operations. This land area includes adequate on-post buffer zones to ensure that no visible smoke extends beyond installation boundaries. In addition, the installation provides adequate lands to ensure that National Ambient Air Quality Standards (NAAQS) are met at and beyond the installation boundaries. Furthermore, the installation can control use of lands and roads within installation boundaries during smoke training events to ensure that safety hazards associated with reduced visibility will not impact pedestrians or motorists. This degree of safety control could not be replicated if smoke training was conducted at an off-post location.

- **Cost.** Use of off-post property for large-scale smoke training would require the Army to purchase or lease extensive land areas. Costs associated with this action would be extremely high, and contrary to the intent of BRAC legislation to reduce operating costs by closing existing installations and consolidating training activities on the remaining installations.

- **Operating Efficiency.** It would be extremely inefficient for troops stationed at FLW to travel to off-post sites to conduct smoke training operations. Smoke training events at FLW will be dictated by current weather conditions that are predicted, in part, by weather/meteorological monitoring devices located within the installation boundaries. In many instances, troops traveling to a remote site would reach the site only to learn that changing weather conditions preclude the ability to train at that time. Time used in travel to and from the site reduces the time available to conduct the training event.

- **Oil Storage and Transport.** Use of an off-post site for smoke training would require transport of equipment and containers of fog oil on Federal, state and local roadways, and/or construction of fog oil storage sites at remote locations that are more difficult to staff and monitor. This additional travel increases operating costs, and the potential for vehicular accidents and oil spills.

- **Emergency Spill Response Capability.** If a fog oil spill did occur during a training event, a remote site would not have immediate access to the trained spill response teams that are always available at FLW. Therefore, an additional burden would be placed on the surrounding civilian community to respond to any emergency that occurred as a result of smoke training operations.

If it is determined during the EIS process that training activities other than smoke training result in significant adverse environmental impacts which cannot be reasonably mitigated, off-post sites will be considered. However, based on the initial screening and analysis, this situation is not expected to occur.

IV.8 GROUPING OF ALTERNATIVES FOR EIS ANALYSIS

Analysis of the environmental impacts associated with the implementation of the proposed action is contained in Section 5, Environmental Consequences. In order to facilitate that analysis, training methods have been grouped into three alternative implementation plans. These alternative plans are called:

- The No Action Alternative which reflects baseline conditions at FLW;
- Relocate Current Practice Alternative (RCP Alternative);
- Optimum Training Method Alternative (OPTM Alternative) and
- Environmentally Preferred Training Method Alternative (EPTM Alternative).

IV.8.1 The No Action Alternative

For the purpose of this analysis, the No Action Alternative will evaluate the impact of not performing the training currently associated with a specific training goal. Impacts of failing to complete specific training requirements will typically involve:

- a loss of skills and an associated reduction in individual readiness for deployment to a wartime or other-than-war environment; and
- a loss of skills and reduced unit readiness for deployment to a wartime or other-than-war environment.

IV.8.2 Relocate Current Practice (RCP) Alternative

This alternative will review the alternative of relocating training, from FMC to FLW, using the same training procedures and techniques that are currently used at FMC.

IV.8.3 Optimum Training Method (OPTM) Alternative

This alternative is designed to identify the Army's optimum training methods for accomplishing training goals at FLW. The OPTM Alternative was formulated to identify and evaluate the impact of implementing the training methods which best met a combination of environmental criteria and operating efficiency criteria as documented in this volume of the EIS. In 42 of the 44 training methods evaluated, the OPTM represents the training method that received the highest total relative score for the six environmental, and the six training and operating criteria. The two training methods which form the exceptions include: TG 7.2 Obscurant, Employment Operations Basic (Static) and TG 7.4 Obscurant, Employment Operations (Field Training Exercises).

- Implementation of the training method which received the highest total score for TG 7.2 would require that static training be conducted using a water manifold on the pulse-jet style generators and a fog oil recycling manifold on the turbine style generators. Both of these manifolds are newly fielded and long-term maintenance data on the items is not available. Although technically possible, questions as to the long-term reliability of these newly fielded manifolds, and difficulties in training in winter precluded its selection as the OPTM. Nevertheless the use of these manifolds in static training has been evaluated for environmental impacts, in Section 5 of the EIS, as the Environmentally Preferred Training Method (EPTM). Once the manifolds have been fielded, and maintenance data is available, the Army will review the potential of implementing their use in static training.

- Implementation of the training method which received the highest total score for TG 7.4 would require a reduction in fog oil use for this training method from up to 64,000 gallons per year to either 44,000 or 28,500 gallons per year. This reduced fog oil usage would require the use of computer simulation systems. Although such systems could be developed and the alternative is technically possible, existing simulation systems are not capable of adequately replicating obscurant employment principles in a field environment. Therefore, although this method was evaluated for environmental impacts, in Section 5 of the EIS, as the EPTM the Army was unable to select this method for the OPTM. If simulation equipment is developed in the future, which can adequately replicate obscurant employment principles in a field environment, the Army will review the potential for implementing their use in field training.

Based on this formulation approach, the use of OPTM (Army's Proposed Action) Alternative training methods (in all of the training goals), when compared to the RCP Alternative, might be expected to:

- provide improved operational readiness through streamlined or improved training procedures;

- offer cost savings over current training methods with no decrease in operational effectiveness;

- reduce or eliminate negative environmental or economic impacts associated with the RCP Alternative methods; and/or

- increase the positive benefits associated with training actions through the use of new technology or the potential synergistic effects of training engineer, military police and chemical specialists at the same location.

If during the selection of the optimum training method, one or more training methods are identified as equally effective in meeting the training goal, then one or more variations in the OPTM Alternative will also be evaluated in the EIS.

IV.8.4 Environmentally Preferred Training Methods (EPTM) Alternative

This alternative is designed to identify the environmentally preferred method of accomplishing each training goal at FLW. The EPTM Alternative is the result of the screening process identified in this volume and represents the combination of training method alternatives which were assigned the highest unweighted numerical score for the environment criteria used during the secondary screening of the viable training method alternatives.